

96680

Access DB# \_\_\_\_\_

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Jeffrey E. Russel Examiner #: 62785 Date: 6-16-2003  
 An Unit: 1654 Phone Number 308-3975 Serial Number: 10/018,806  
 Mail Box and Bldg/Room Location: \_\_\_\_\_ Results Format Preferred (circle): PAPER DISK E-MAIL  
CM1-11013/CM1-9807

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

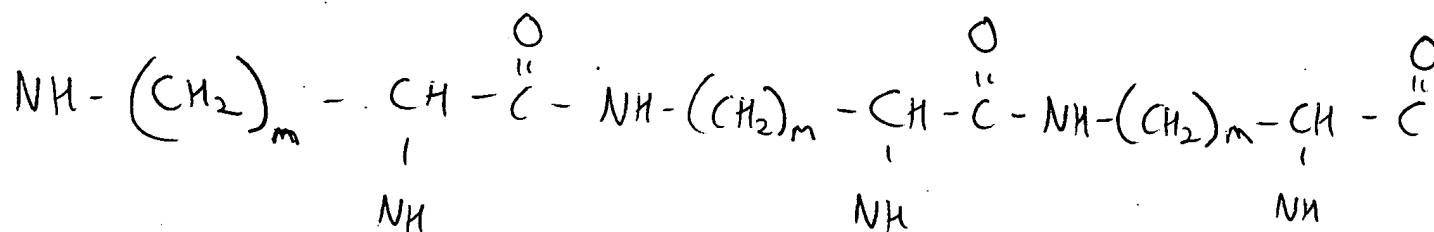
Title of Invention: Method of Preparing Palmitation Based Bioconjugates Suitable For...

Inventors (please provide full names): P. Szego

Earliest Priority Filing Date: 5-7-2002

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search the following partial structure



where  $m = 1 - 4$ .

Please use the keywords conjugat?, bioconjugat?, DNA, RNA, nucleic to narrow any hits.

Thank you.

*JER*

=> d his ful

(FILE 'HOME' ENTERED AT 14:53:10 ON 17 JUN 2003)

FILE 'HCAPLUS' ENTERED AT 14:53:22 ON 17 JUN 2003

E SZEGO PETER/AU

L1 11 SEA ABB=ON ("SZEGO P"/AU OR "SZEGO PETER"/AU OR "SZEGO PETER  
L"/AU)  
D TI 1-11  
SELECT RN L1 1

FILE 'REGISTRY' ENTERED AT 14:54:48 ON 17 JUN 2003

L2 10 SEA ABB=ON (108-30-5/BI OR 88848-79-7/BI OR 14464-31-4/BI OR  
1510-21-0/BI OR 15663-27-1/BI OR 25988-63-0/BI OR 26588-20-5/BI  
OR 57-10-3/BI OR 57-88-5/BI OR 6066-82-6/BI)

FILE 'HCAPLUS' ENTERED AT 14:55:53 ON 17 JUN 2003

L3 1 SEA ABB=ON L1 AND L2

FILE 'REGISTRY' ENTERED AT 14:58:52 ON 17 JUN 2003

L4 STR  
L5 1 SEA SSS SAM L4  
L6 250 SEA SSS FUL L4

FILE 'HCAPLUS' ENTERED AT 15:10:01 ON 17 JUN 2003

L7 128 SEA ABB=ON L6  
L8 0 SEA ABB=ON L7 AND ?SZEGO?/AU  
L9 59 SEA ABB=ON L7 AND (?CONJUGAT? OR DNA OR RNA OR ?NUCLEIC?)

FILE 'REGISTRY' ENTERED AT 15:17:28 ON 17 JUN 2003

L10 STR L4  
L11 STR  
L12 0 SEA SSS SAM L11  
L13 STR L11  
L14 0 SEA SSS SAM L13  
L15 STR L13  
L16 STR L15  
L17 0 SEA SSS SAM L16  
L18 0 SEA SSS FUL L16  
L19 STR L15  
L20 0 SEA SSS SAM L19  
L21 0 SEA SSS FUL L19  
L22 STR L19  
L23 0 SEA SSS SAM L22  
L24 STR L22  
L25 0 SEA SSS SAM L24  
L26 STR L24  
L27 STR L26  
L28 0 SEA SSS SAM L27

FILE 'REGISTRY' ENTERED AT 15:46:36 ON 17 JUN 2003

E POLYEPSILONLYSINE/CN  
E POLYEPSILON LYSINE/CN  
E POLYEPSILON LYS/CN  
E POLY EPSILON LYS/CN  
E POLY E LYS/CN  
E POLYLYSINE/CN

FILE 'HCAPLUS' ENTERED AT 15:48:22 ON 17 JUN 2003

L29 0 SEA ABB=ON ?POLYEPSILON LYSINE?  
L30 44 SEA ABB=ON ?POLY EPSILON LYSINE?

FILE 'REGISTRY' ENTERED AT 15:51:27 ON 17 JUN 2003

L31 1 SEA ABB=ON 28211-04-3/RN

FILE 'HCAPLUS' ENTERED AT 15:51:43 ON 17 JUN 2003

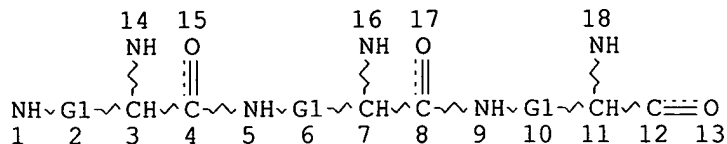
L32 232 SEA ABB=ON L31 OR ?POLY EPSILON LYSINE?  
L33 232 SEA ABB=ON L31 OR ?POLY EPSILON LYS?  
L34 17 SEA ABB=ON L33 AND (?CONJUGAT? OR DNA OR RNA OR ?NUCLEIC?)  
L35 68 SEA ABB=ON L33 AND (?CONJUGAT? OR DNA OR RNA OR ?NUCLEIC? OR  
?ACYLAT? OR ?SUCCINIC? OR ?PALMIT? OR ?FATTY?(W)?ACID?)

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO' ENTERED AT  
15:54:42 ON 17 JUN 2003

L36 4 SEA ABB=ON L35  
L37 3 DUP REMOV L36 (1 DUPLICATE REMOVED)

=> d que stat 17

L4 STR



REP G1=(1-4) CH2

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

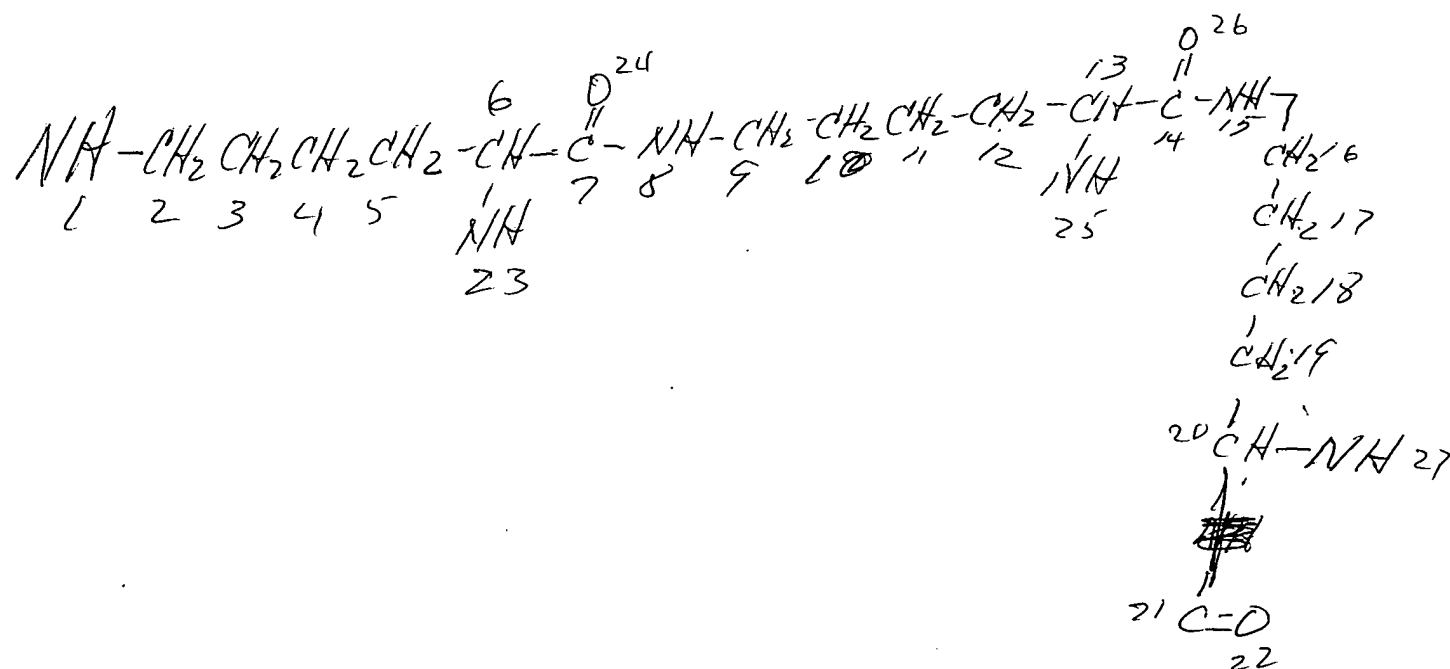
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

L6 250 SEA FILE=REGISTRY SSS FUL L4

L7 128 SEA FILE=HCAPLUS ABB=ON L6

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=> d ibib abs hitstr l3 1-1

L3 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:12300 HCAPLUS

DOCUMENT NUMBER: 134:76410

TITLE: Preparation of polycation-based bioconjugates suitable for transporting different kinds of drugs within the body

INVENTOR(S): Szego, Peter

PATENT ASSIGNEE(S): Hung.

SOURCE: PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

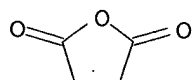
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001000242	A2	20010104	WO 2000-HU61	20000628
WO 2001000242	A3	20011122		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000012633	A	20020402	BR 2000-12633	20000628
EP 1202748	A2	20020508	EP 2000-944116	20000628
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003503363	T2	20030128	JP 2001-505949	20000628
EE 200100715	A	20030217	EE 2001-715	20000628
NO 2001006391	A	20020204	NO 2001-6391	20011227
PRIORITY APPLN. INFO.:			HU 1999-2217	A 19990629
			WO 2000-HU61	W 20000628

AB The invention relates to new polycation bioconjugates and to a method for producing them. The polycation bioconjugates are characterized by that the polycations are capable of transporting drugs of different types in the organism, i.e., for functioning as carrier mols., and thus are able to enhance the biol. effectiveness of the transported mols., and consequently they can, favorably inhibit malignant cell proliferation. They also have antimicrobial effects, or are suitable for transportation of genes. A further characteristic of the polycation bioconjugates is that each of them contains isopolypeptide carrier mols., bearing free .alpha.-amino group, as a common characteristic structural element. Enhancer mols. (same or different) having appropriate binding functions are coupled by chem. bonds directly and/or indirectly through connecting mols. that may be identical or different from the carrier mol. Thus, pol(lysine-HBr) was treated with succinic anhydride and the product was conjugated with cis-platin. This compd. had a significant inhibitory effect on the transplantable rodent tumors.

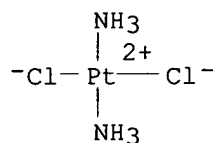
IT 108-30-5DP, Succinic anhydride, reaction products with polylysine 15663-27-1DP, Cisplatinum, reaction products with polylysine derivs. 25988-63-0DP, Poly(lysine) hydrogen bromide, reaction products with succinimide derivs. 26588-20-5DP, Poly(L-lysine) hydrogen bromide, SRU, reaction products with succinimide derivs.

88848-79-7DP, reaction products with polylysine  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (prepn. of polycation-based bioconjugates suitable for transporting different kinds of drugs within the body)

RN 108-30-5 HCAPLUS  
 CN 2,5-Furandione, dihydro- (9CI) (CA INDEX NAME)



RN 15663-27-1 HCAPLUS  
 CN Platinum, diamminedichloro-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 25988-63-0 HCAPLUS  
 CN L-Lysine, homopolymer, hydrobromide (9CI) (CA INDEX NAME)

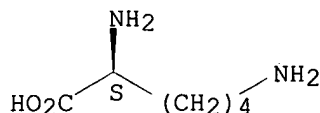
CM 1

CRN 25104-18-1  
 CMF (C6 H14 N2 O2)x  
 CCI PMS

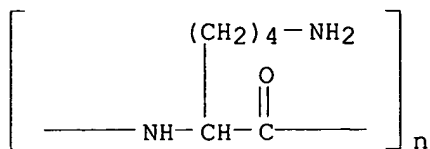
CM 2

CRN 56-87-1  
 CMF C6 H14 N2 O2

Absolute stereochemistry.



RN 26588-20-5 HCAPLUS  
 CN Poly[imino[1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]], hydrobromide, (1S)- (9CI) (CA INDEX NAME)

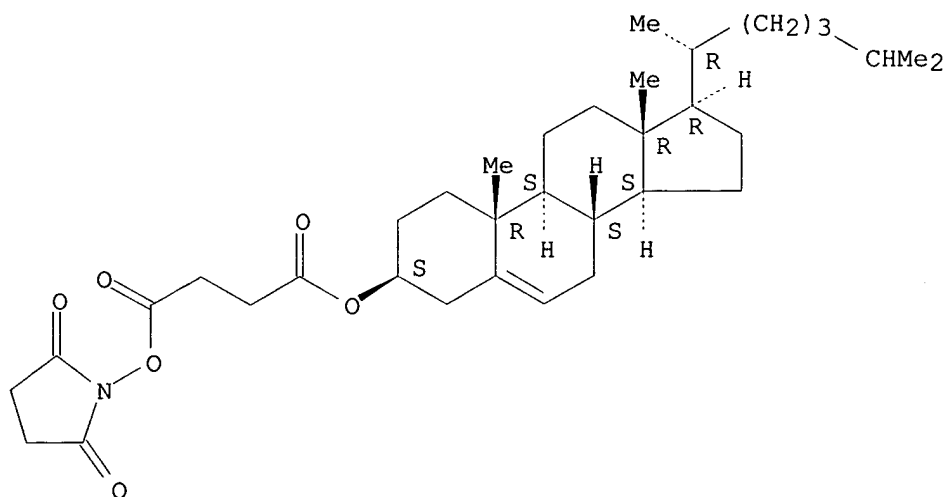


●x HBr

RN 88848-79-7 HCAPLUS

CN Cholest-5-en-3-ol (3.beta.)-, 4-[(2,5-dioxo-1-pyrrolidinyl)oxy]-4-oxobutanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 57-10-3, Palmitic acid, reactions 57-88-5, Cholesterol, reactions 108-30-5, Succinic anhydride, reactions 6066-82-6, N-Hydroxysuccinimide

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of polycation-based bioconjugates suitable for transporting different kinds of drugs within the body)

RN 57-10-3 HCAPLUS

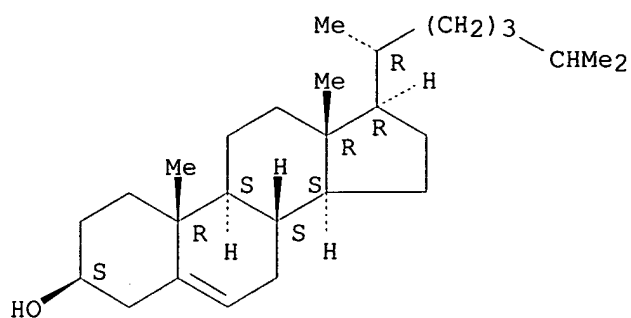
CN Hexadecanoic acid (9CI) (CA INDEX NAME)

HO<sub>2</sub>C-(CH<sub>2</sub>)<sub>14</sub>-Me

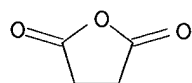
RN 57-88-5 HCAPLUS

CN Cholest-5-en-3-ol (3.beta.)- (9CI) (CA INDEX NAME)

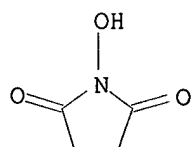
Absolute stereochemistry.



RN 108-30-5 HCAPLUS  
CN 2,5-Furandione, dihydro- (9CI) (CA INDEX NAME)

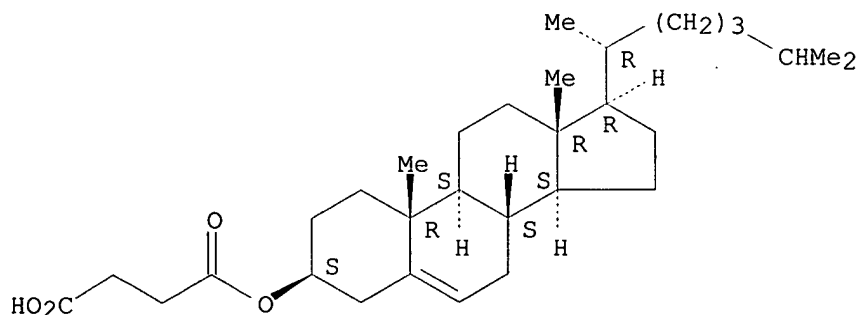


RN 6066-82-6 HCAPLUS  
CN 2,5-Pyrrolidinedione, 1-hydroxy- (9CI) (CA INDEX NAME)



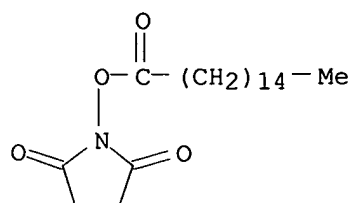
IT 1510-21-0P 14464-31-4P 88848-79-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. of polycation-based bioconjugates suitable for transporting  
different kinds of drugs within the body)  
RN 1510-21-0 HCAPLUS  
CN Cholest-5-en-3-ol (3.beta.)-, hydrogen butanedioate (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 14464-31-4 HCAPLUS  
CN 2,5-Pyrrolidinedione, 1-[(1-oxohexadecyl)oxy]- (9CI) (CA INDEX NAME)

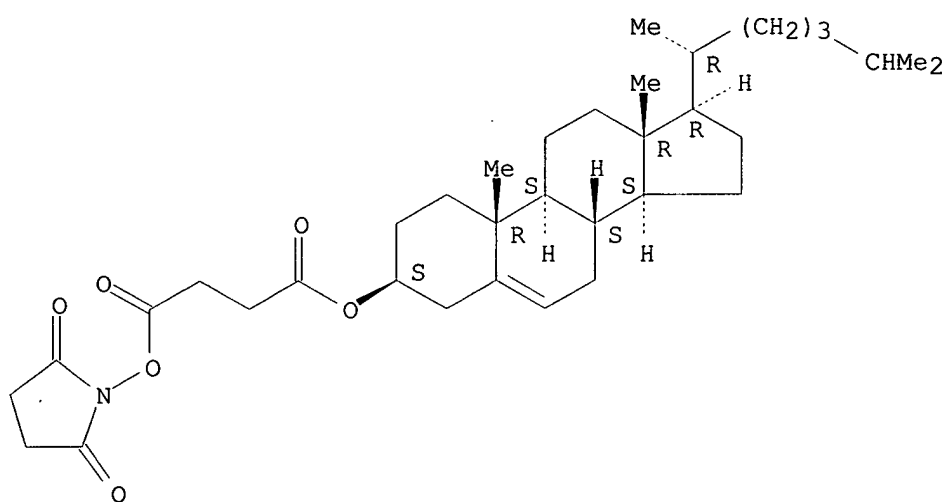




RN 88848-79-7 HCAPLUS

CN Cholest-5-en-3-ol (3.β.)-, 4-[(2,5-dioxo-1-pyrrolidinyl)oxy]-4-oxobutanoate (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



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L31 1 SEA FILE=REGISTRY ABB=ON 28211-04-3/RN  
 L33 232 SEA FILE=HCAPLUS ABB=ON L31 OR ?POLY EPSILON LYS?  
 L35 68 SEA FILE=HCAPLUS ABB=ON L33 AND (?CONJUGAT? OR DNA OR RNA OR  
 ?NUCLEIC? OR ?ACYLAT? OR ?SUCCINIC? OR ?PALMIT? OR ?FATTY?(W)?A  
 CID?)

=> d ibib abs hitrn 135 1-68

L35 ANSWER 1 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2003:352150 HCAPLUS  
 DOCUMENT NUMBER: 138:336410  
 TITLE: Immunostimulatory adjuvants and vaccines containing  
 them  
 INVENTOR(S): Wakamoto, Hiroaki  
 PATENT ASSIGNEE(S): Chisso Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003128589	A2	20030508	JP 2001-321323	20011019
PRIORITY APPLN. INFO.:			JP 2001-321323	20011019

AB The adjuvants for vaccines contain .epsilon.-polylysine (PL), which shows strong adsorption and sustained-release of antigens and exhibits high immunostimulatory activity. Linoleic acid (L) was stirred with N-hydroxysuccinimide and 1,3-dicyclohexylcarbodiimide in DMSO and treated with PL to give L-PL complex. The amts. of anti-bovine serum albumin (BSA) antibody produced in mice 7, 14, 21, and 28 days after s.c. injection of the L-PL complex with BSA were significantly higher than that in controls injected only with BSA.

IT **28211-04-3DP**, .epsilon.-Polylysine, **conjugates** with linoleic acid or cellulose  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (immunostimulatory adjuvants contg. .epsilon.-polylysine with sustained-release of antigens for vaccines)

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (immunostimulatory adjuvants contg. .epsilon.-polylysine with sustained-release of antigens for vaccines)

L35 ANSWER 2 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2003:331278 HCAPLUS  
 TITLE: pH- and Thermosensitive Supramolecular Assembling  
 System: Rapidly Responsive Properties of  
 .beta.-Cyclodextrin-**Conjugated Poly**  
 (**.epsilon.-lysine**)  
 AUTHOR(S): Choi, Hak Soo; Huh, Kang Moo; Ooya, Tooru; Yui,  
 Nobuhiko  
 CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute  
 of Science and Technology, Ishikawa, 923-1292, Japan  
 SOURCE: Journal of the American Chemical Society (2003),

125(21), 6350-6351  
CODEN: JACSAT; ISSN: 0002-7863  
American Chemical Society

PUBLISHER:  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB .beta.-Cyclodextrin-conjugated poly(.epsilon  
.-lysine) (.beta.-CDPL) was synthesized as a novel polymeric  
host for constructing a smart supramol. assembling system. Systematic  
studies on the inclusion complexation between the polymeric host with an  
.alpha.- or .beta.-CD cavity and a model guest mol. provided evidence that  
dual cooperative interactions, specific host-guest interaction and  
intermol. ionic interaction, played a dominant role in leading to a fast  
aggregation phenomenon. In addn., a rapid phase transition induced by the  
supramol. assembly was obsd. reversibly in response to a small change in  
pH or temp.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 3 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:194720 HCAPLUS

DOCUMENT NUMBER: 138:226818

TITLE: Wet wipes impregnated with solutions containing  
.epsilon.-polylysine and antiseptics

INVENTOR(S): Ito, Takashi; Nishida, Mamoru

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003073694	A2	20030312	JP 2001-314296	20011011
PRIORITY APPLN. INFO.:			JP 2001-187077	A 20010620

AB This invention relates to wet wipes which contain less amts. of  
antiseptics than known compns. with excellent antibacterial effects  
without skin irritation. The solns. for wet wipes comprise  
.epsilon.-polylysine and/or salts thereof and antiseptics in a pH buffer  
agent. For example, a soln. contained .epsilon.-polylysine 0.006, K  
sorbate 0.04, Na dehydroacetate 0.02, methylparaben 0.04, and distd. water  
99.894%. A nonwoven fabric 20 g was placed in 40 g the above soln. for  
impregnation. The wetted fabric showed an excellent antibacterial  
activity against Escherichia coli, Staphylococcus aureus, and Aspergillus  
niger.

IT 28211-04-3, ..epsilon.-Polylysine

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)

(wet wipes impregnated with solns. contg. .epsilon.-polylysine and  
antiseptics and buffers)

L35 ANSWER 4 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:112884 HCAPLUS

DOCUMENT NUMBER: 138:158541

TITLE: Cosmetics and cosmetic preservatives containing  
.epsilon.-polylysine and organic acid salts

INVENTOR(S): Ito, Takashi; Hiraki, Jun

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003040724	A2	20030213	JP 2001-193512	20010626

PRIORITY APPLN. INFO.: JP 2001-153033 A 20010522

AB The cosmetic preservatives contain .epsilon.-polylysine (I) and/or its salts and org. acid salts. The preservatives are free from adsorption by cosmetic components, salt formation with them, and inhibition of the antimicrobial action, and cosmetics contg. the preservatives have slight skin-irritating action. Mixing I 0.5, tri-Na citrate 5, glycerin monocaprate 1, and H2O 93.5% gave a preservative. A lotion was prepd. from polyoxyethylene glyceryl pyroglutamate isostearate, polyoxyethylene hydrogenated castor oil, 1,3-butylene glycol, glycerin, propylene glycol, isostearyl alc., and the preservative. Antibacterial and antifungal effect of the preservative was also examd.

IT **28211-04-3**, .epsilon.-Polylysine  
RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(cosmetic preservatives contg. .epsilon.-polylysine or its salts, org. acid salts, and optionally org. acids and pH buffers)

L35 ANSWER 5 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2003:17394 HCAPLUS  
DOCUMENT NUMBER: 138:78164  
TITLE: Antibacterial cleansing compositions containing **acylated** polylysine for cosmetic and kitchen use  
INVENTOR(S): Umesawa, Shohei; Tsushima, Yasuhiro; Komiya, Kaoru  
PATENT ASSIGNEE(S): Asahi Denka Kogyo K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003003196	A2	20030108	JP 2001-191521	20010625

PRIORITY APPLN. INFO.: JP 2001-191521 20010625

AB Title detergents are claimed. Thus, a skin cleansing compn. contg. lauroylated .epsilon.-polylysine (**acylation** degree 9.8 mol%) and EDTA.2Na showed good foamability and storage stability, foam softness, strong antibacterial activity, and denaturation of egg albumin 8%.

IT **28211-04-3DP**, .epsilon.-Polylysine, **acylated**  
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); COS (Cosmetic use); IMF (Industrial manufacture); SPN (Synthetic preparation); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(antibacterial nontoxic cleansing compns. contg. **acylated** polylysine and optional chelating agents for cosmetic and kitchen use)

L35 ANSWER 6 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2003:17309 HCAPLUS  
DOCUMENT NUMBER: 138:61084

TITLE: Nonirritant storage-stable cosmetics containing antiseptics  
INVENTOR(S): Ito, Takafumi; Hiraki, Jun  
PATENT ASSIGNEE(S): Chisso Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003002810	A2	20030108	JP 2001-187078	20010620

PRIORITY APPLN. INFO.: JP 2001-187078 20010620

AB The cosmetics contain paraben, org. acid salts, and .epsilon.-polylysine (EPL) and/or its salts. A skin lotion contg. EPL 0.005, methylparaben 0.05, tri-Na citrate 0.1, polyoxyethylene glyceryl pyroglutamate isostearate 1.5, polyoxyethylene hydrogenated castor oil 0.5, Na hyaluronate 0.1, 1,3-butylene glycol 4, glycerin 3, propylene glycol 3, isostearyl alc. 0.1, and H2O 87.645 wt.% was stable at 30.degree. for 90 days and controlled Candida albicans, Aspergillus niger, Escherichia coli, Pseudomonas aeruginosa, and Staphylococcus aureus.

IT **28211-04-3**, .epsilon.-Polylysine  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses) (nonirritant storage-stable antiseptic cosmetics contg. paraben, org. acids (salts), and polylysine)

L35 ANSWER 7 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:626031 HCAPLUS  
DOCUMENT NUMBER: 137:175034  
TITLE: Cleansing wet tissue containing polylysine and electrolytes  
INVENTOR(S): Ito, Takashi; Hiraki, Jun  
PATENT ASSIGNEE(S): Chisso Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002233471	A2	20020820	JP 2001-33383	20010209

PRIORITY APPLN. INFO.: JP 2001-33383 20010209

AB The tissue contains .epsilon.-polylysine (I) and/or its salts and electrolytes. The tissue shows low skin irritation, no discoloration during storage, and high antimicrobial effect. A rayon nonwoven fabric was impregnated with an aq. soln. contg. I and lactic acid to prep. a wet tissue.

IT **28211-04-3**, .epsilon.-Polylysine  
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (cleansing wet tissue contg. polylysine and electrolytes)

L35 ANSWER 8 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2002:516395 HCAPLUS  
DOCUMENT NUMBER: 137:46450

TITLE: Polylysine and/or salt thereof as de-fogging agent for packaging films  
INVENTOR(S): Ito, Keishi; Arakawa, Kenji; Hiraki, Jun  
PATENT ASSIGNEE(S): Chisso Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002194324	A2	20020710	JP 2001-296752	20010927

PRIORITY APPLN. INFO.: JP 2000-297208 A 20000928

AB A de-fogging plastic film contains .epsilon.-polylysine and/or salt thereof and a surfactant such as sucrose **fatty acid** ester, monoglycerin **fatty acid** ester, di-glycerin **fatty acid** ester, polyglycerin **fatty acid** ester, and sorbitan **fatty acid** ester. The de-fogging agent and surfactant are dissolved in water or in alc. soln., are added to packaging film (polymer film or sheet) for preventing fogging. The packaging film also controls adhesion of microorganisms and maintains the freshness of produce.

IT **28211-04-3**, .epsilon.-Polylysine **28211-04-3D**, .epsilon.-Polylysine, salts  
RL: FFD (Food or feed use); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses)  
(as de-fogging agent for food packaging materials)

L35 ANSWER 9 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2002:381290 HCAPLUS  
DOCUMENT NUMBER: 136:385263  
TITLE: Antimicrobial modified starch and its manufacture  
INVENTOR(S): Takahashi, Koji; Hattori, Makoto; Yoshida, Tadashi; Inakuma, Takahiro  
PATENT ASSIGNEE(S): Kagome Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002145901	A2	20020522	JP 2000-341394	20001109

PRIORITY APPLN. INFO.: JP 2000-341394 20001109

AB The modified starch is manufd. by drying of aq. suspensions contg. starch, .epsilon.-poly-L-lysine (I), and carbohydrate **fatty acid** esters and reaction of the dried products under heat. Potato starch was hydrolyzed with aq. H2SO4, suspended in H2O with I, glucose stearate, and fructose stearate, the suspension was freeze-dried, and heated at 50.degree. and relative humidity 79% for 80 h to give Maillard reaction products, which effectively inhibited Escherichia coli, Staphylococcus aureus, and Candida utilis.

IT **28211-04-3DP**, .epsilon.-Polylysine, reaction products with starch and carbohydrate **fatty acid** esters  
RL: BSU (Biological study, unclassified); FFD (Food or feed use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation);

## USES (Uses)

(antimicrobial Maillard reaction products of starch with polylysine and carbohydrate **fatty acid** esters for food)

L35 ANSWER 10 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:361324 HCAPLUS

DOCUMENT NUMBER: 137:77965

TITLE: Production of .epsilon.-polylysine in an airlift bioreactor (ABR)

AUTHOR(S): Kahar, Prihardi; Kobayashi, Kengo; Iwata, Toshiharu; Hiraki, Jun; Kojima, Mami; Okabe, Mitsuyasu

CORPORATE SOURCE: United Graduate School of Agricultural Science, Gifu University, Gifu, 501-1193, Japan

SOURCE: Journal of Bioscience and Bioengineering (2002), 93(3), 274-280

CODEN: JBBIF6; ISSN: 1389-1723

PUBLISHER: Society for Bioscience and Bioengineering, Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This paper deals with studies on .epsilon.-poly-L-lysine (.epsilon.-PL) prodn. in an airlift bioreactor (ABR) using Streptomyces albulus S410 (S410) to minimize the prodn. cost including the downstream processing of .epsilon.-PL. In a 5-l ABR, 30 g/l of .epsilon.-PL was produced with a power consumption of 0.3 kW/m<sup>3</sup>, the prodn. level being similar to that in a 5-l jar fermentor with a power consumption of 8.0 kW/m<sup>3</sup>. Furthermore, the leakage of intracellular **nucleic acid** (INA)-related substances into the culture broth in the ABR was less than that in the jar fermentor. Due to the high-level power consumption (8.0 kW/m<sup>3</sup>) in the jar fermentor, the morphol. of the cells changed from the pellet to filament form due to the extensive shear stress arising from continuous agitation, thereby increasing the leakage of the INA-related substances into the culture broth. This suggested that ABR would have an advantage in the low-cost prodn. of .epsilon.-PL over stirred tank type reactors (STR).

IT 28211-04-3P, .epsilon.-Polylysine

RL: BMF (Bioindustrial manufacture); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)

(prodn. of .epsilon.-polylysine in airlift bioreactor (ABR))

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 11 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:359905 HCAPLUS

DOCUMENT NUMBER: 136:356363

TITLE: Surfactant-free antibacterial carbohydrate compositions and their uses

INVENTOR(S): Ito, Keishi; Arakawa, Kenji; Nishida, Mamoru; Hiraki, Jun

PATENT ASSIGNEE(S): Chisso Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002138161	A2	20020514	JP 2000-336525	20001102
PRIORITY APPLN. INFO.:			JP 2000-336525	20001102

AB The compns. comprise carbohydrate-contg. compds., .epsilon.-polylysine

and/or their salts, and electrolytes. Thus, a rayon viscose soln. contg. 0.1% (based on cellulose) .epsilon.-polylysine, and 0.2% HCl was spun and knitted to give a fabric.

IT **28211-04-3**, .epsilon.-Polylysine

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)  
(surfactant-free antibacterial carbohydrate compns.)

L35 ANSWER 12 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:246977 HCAPLUS

DOCUMENT NUMBER: 136:262288

TITLE: Antimicrobial water-absorbing mat for fresh fish and meat

INVENTOR(S): Wada, Yoshio; Ito, Keiji; Arakawa, Kenji

PATENT ASSIGNEE(S): Chisso Corp., Japan; Kinsei Seishi Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002096878	A2	20020402	JP 2000-288111	20000922
PRIORITY APPLN. INFO.:			JP 2000-288111	20000922

AB The mat comprises (A) an opaque non-water-absorbing surface sheet contg. many small dimples having cuts between the side walls and the bottoms, (B) .gtoreq.1 water-absorbing paper or nonwoven fabric supporting .epsilon.-polylysine (salts) on the surface and bonded to the back surface of A, and (C) an outer layer sheet on the back surface of B. The mat shows good antimicrobial effect and absorption of blood or juice from fish or meat.

IT **28211-04-3**, .epsilon.-Polylysine

RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(microbicide; antimicrobial water-absorbing mat for fresh fish and meat)

L35 ANSWER 13 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:225382 HCAPLUS

DOCUMENT NUMBER: 137:20519

TITLE: Synthesis of .alpha.-cyclodextrin-conjugated **poly(.epsilon.-lysine)s** and their inclusion complexation behavior

AUTHOR(S): Huh, Kang Moo; Tomita, Hajime; Lee, Won Kyu; Ooya, Tooru; Yui, Nobuhiko

CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa, 923-1292, Japan

SOURCE: Macromolecular Rapid Communications (2002), 23(3), 179-182

CODEN: MRCOE3; ISSN: 1022-1336

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:20519

AB Novel functional polymers utilizing specific host/guest interactions were designed by introducing .alpha.-CD host mols. into **poly(.epsilon.-lysine)** chains as side groups. An interesting



phase sepn. was obsd. as a result of the inclusion complexation between the polymeric host and 3-(trimethylsilyl)propionic acid as a model guest in aq. media. This water-sol. polymeric host would be useful for various applications, particularly drug delivery, due to its biodegradability, low toxicity, and unique functionality represented as a complexation-induced phase sepn.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 14 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:855726 HCAPLUS  
DOCUMENT NUMBER: 136:10901  
TITLE: Nonirritant antiseptic cosmetics containing polylysine  
INVENTOR(S): Uchino, Shoko; Sato, Ikuo; Matsuoka, Shingo; Aoki, Kenji; Hiraki, Jun  
PATENT ASSIGNEE(S): Chisso Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, '7 pp'.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001328920	A2	20011127	JP 2000-145142	20000517
PRIORITY APPLN. INFO.:			JP 2000-145142	20000517

AB The cosmetics, which control gram-neg. bacteria, contain anionic compds., .epsilon.-polylysine (salts), and optionally (in)org. acid salts, buffer substances, alkali metals, or alkali metal hydroxides. A cosmetic contg. Na hyaluronate 0.1, D-sorbitol 2.5, elastin 1.0, Perilla frutescens ext. 0.1, Na citrate 0.1, .epsilon.-polylysine 0.005, and H2O 96.195 wt.% showed no turbidity and inhibited the growth of Enterobacter for 720 h at 30.degree..

IT **28211-04-3**, .epsilon.-Polylysine  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(nonirritant antiseptic cosmetics contg. anionic compds. and polylysine)

L35 ANSWER 15 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:825196 HCAPLUS  
DOCUMENT NUMBER: 137:114346  
TITLE: Relative polycation interactions with whole blood and model media  
AUTHOR(S): Domurado, Dominique; Moreau, Elisabeth; Chotard-Ghodsni, Roxana; Ferrari, Isabelle; Chapon, Pascal; Vert, Michel  
CORPORATE SOURCE: Centre de Recherche sur les Biopolymeres Artificiels, URA 5473 CNRS, Faculty of Pharmacy, University of Montpellier 1, Montpellier, 34060/2, Fr.  
SOURCE: Biomedical Polymers and Polymer Therapeutics, [Proceedings of the International Symposium on Frontiers in Biomedical Polymers Including Polymer Therapeutics: From Laboratory to Clinical Practice], 3rd, Biwa Lake, Japan, May 23-27, 1999 (2001), Meeting Date 1999, 159-176. Editor(s): Chiellini, Emo. Kluwer Academic/Plenum Publishers: New York, N. Y. CODEN: 69BZMR

DOCUMENT TYPE: Conference

LANGUAGE: English

AB A review and discussion of the main results of the investigation on the behavior of red blood cells (RBC), which are resuspended in different media. This shows that the phenomena depend primarily on polyelectrolytic interactions involving several charged species, such as the polycation, plasma proteins, and RBC. Data is discussed with regard to the polycation hemotoxicity and to the interest of polycations as **DNA**-condensing species in gene therapy. It is suggested that the efforts should be made to standardize the protocol of investigation of the bioactivity of synthetic polycations, particularly regarding pharmacol. activity, drug transport, and gene transfection.

IT 28211-04-3, Poly(.epsilon.-lysine)

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(relative polycation interactions with whole blood and model media)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 16 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:698033 HCAPLUS

DOCUMENT NUMBER: 135:226222

TITLE: Gluconic acid salt and food preservatives

INVENTOR(S): Onishi, Sayaka

PATENT ASSIGNEE(S): Sanyu Y. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001258527	A2	20010925	JP 2000-124971	20000322
PRIORITY APPLN. INFO.:			JP 2000-124971	20000322
AB The food preservatives are prepd. from a mixt. of sodium and/or potassium gluconate, and glycine; with the addn. of .gtoreq.1 substances selected from carboxylic acid or salt, ethanol, sucrose fatty ester, vitamin B1 ester, .epsilon.-polylysine, protamine, lysozyme, chitosan, and polyphosphate. The food preservatives are highly effective and have good and balanced taste.				

IT 28211-04-3, .epsilon.-Polylysine

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(gluconic acid salt and food preservatives)

L35 ANSWER 17 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:289760 HCAPLUS

DOCUMENT NUMBER: 134:310085

TITLE: Boiled vegetable preservatives containing calcium salts and organic acid salts, etc. and method to preserve boiled vegetables using them

INVENTOR(S): Kamioka, Hidenari; Iwasaki, Hiromi; Okuno, Haruhiko

PATENT ASSIGNEE(S): Okuno Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001112411	A2	20010424	JP 1999-291592	19991013
PRIORITY APPLN. INFO.:			JP 1999-291592	19991013

AB The preservatives contain Ca salts and .gtoreq.1 selected from tri-Na citrate, monopotassium citrate, monopotassium citrate, Na lactate, monosodium fumarate, Na DL-malate, Na DL-tartrate, monosodium succinate, sodium acetate, glycine, lower **fatty acid** monoglycerides, .epsilon.-polylysine, protamine, lysozyme, and Phyllostachys pubescens ext. Boiled vegetables are preserved by boiling vegetables in a soln. contg. Ca salts and .gtoreq.1 selected from the above substances at certain amts. or by soaking boiled vegetables in the soln. The boiled vegetables are prevented from maceration, breaking, and discoloration.

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (boiled vegetable preservatives contg. Ca salts and org. acid salts and polysine, prevent maceration and discoloration)

L35 ANSWER 18 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2001:217880 HCAPLUS  
 DOCUMENT NUMBER: 134:218313  
 TITLE: Natural bactericides preparation from Eucalyptus leaf extract  
 INVENTOR(S): Takahashi, Tetsunari  
 PATENT ASSIGNEE(S): Oji Paper Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001081007	A2	20010327	JP 1999-256780	19990910
PRIORITY APPLN. INFO.:			JP 1999-256780	19990910

AB The long-acting natural bactericides are prepd. from polar org. solvent ext. of the Eucalyptus leaf with the addn. of chitosan and polylysine. The polar org. solvent ext. and chitosan have a wt. ratio of 1:10 to 10:1. Polylysine amts. 0.1-10 wt.% of the combination of the chitosan and polar org. solvent ext. Addnl., the natural bactericides contain glycerin fatty ester 0.0001-1 wt.%.

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)  
 (natural bactericides prepn. from Eucalyptus leaf ext.)

L35 ANSWER 19 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2001:174034 HCAPLUS  
 DOCUMENT NUMBER: 134:203779  
 TITLE: Aqueous solutions containing polylysine for control of microorganisms in air, and their use  
 INVENTOR(S): Watanabe, Takashi; Miyano, Nobuo; Asano, Mikinori  
 PATENT ASSIGNEE(S): Taishoo Technos K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001064113	A2	20010313	JP 1999-241628	19990827
PRIORITY APPLN. INFO.:			JP 1999-241628	19990827
AB The solns., which are applied to air by spraying, contain 1-20 wt.% .epsilon.-polylysine (I). I 1.5, H2O 87.7, capric acid monoglyceride 1, EtOH 9.5, and lactic acid 0.3 part were mixed to give a soln., which showed antimicrobial effect on Escherichia coli, Pseudomonas aeruginosa, Staphylococcus aureus, and Bacillus subtilis in 1 min.				
IT <b>28211-04-3</b> , .epsilon.-Polylysine				
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)				
(aq. solns. contg. polylysine for control of microorganisms in air)				

L35 ANSWER 20 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2000:693992 HCAPLUS  
 DOCUMENT NUMBER: 133:237108  
 TITLE: Food preservatives containing monoglycerin **fatty acid** esters and polylysine  
 INVENTOR(S): Matsumoto, Yasuo; Fukushi, Hideaki; Hiraki, Jun  
 PATENT ASSIGNEE(S): Chisso Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000270821	A2	20001003	JP 1999-77301	19990323
PRIORITY APPLN. INFO.:			JP 1999-77301	19990323
AB A food preservative contains .gtoreq. 2 C8-12 <b>fatty acid</b> monoglycerin esters, .epsilon.-polylysine or salts thereof, and glycine. The preservative inhibits growth of microorganisms, yeasts and fungi and has little effects on the taste of food.				
IT <b>28211-04-3</b> , .epsilon.-Polylysine				
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)				
(food preservatives contg. monoglycerin <b>fatty acid</b> esters and polylysine)				

L35 ANSWER 21 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2000:688374 HCAPLUS  
 DOCUMENT NUMBER: 133:233569  
 TITLE: Detection of plasmid pNO33 containing .epsilon.-poly-L-lysine-producing bacteria and .epsilon.-poly-L-lysine biosynthesis  
 INVENTOR(S): Inoue, Satoshi; Takagi, Hiroshi; Nakamori, Shigeru  
 PATENT ASSIGNEE(S): Chisso Corporation, Japan  
 SOURCE: PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000056892	A1	20000928	WO 2000-JP1698	20000321

W: JP, US

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.:

JP 1999-77445 A 19990323

AB A method for detecting an .epsilon.-poly-L-lysine-producing bacteria based on detecting plasmid pNO33-derived base sequence; and a process for producing .epsilon.-poly-L-lysine using the strain detected by the above detection method, are disclosed. PCR or hybridization method can be used. The method was demonstrated with detection of .epsilon.-poly-L-lysine-producing IFO14147 strain with PCR.

IT 28211-04-3P, .epsilon.-Polylysine

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation)

(detection of plasmid pNO33 contg. .epsilon.-poly-L-lysine-producing bacteria and .epsilon.-poly-L-lysine biosynthesis)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 22 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:573947 HCAPLUS

DOCUMENT NUMBER: 133:173038

TITLE: Isolation and sequence analysis of cyclic plasmid pNO33 from .epsilon.-poly-L-lysine-producing actinomycete Streptomyces albulus IFO14147

INVENTOR(S): Inoue, Satoshi; Takagi, Hiroshi; Nakamori, Shigeru

PATENT ASSIGNEE(S): Chisso Corporation, Japan

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000047753	A1	20000817	WO 2000-JP708	20000209

W: US

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

JP 2000228981 A2 20000822 JP 1999-32729 19990210

EP 1158053 A1 20011128 EP 2000-902874 20000209

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

PRIORITY APPLN. INFO.:

JP 1999-32729 A 19990210

WO 2000-JP708 W 20000209

AB Plasmid pNO33, a cyclic plasmid originating in an actinomycetes belonging to the genus Streptomyces, is disclosed. A high-mol.-size plasmid (37-kb), named pNO33, was isolated from Streptomyces albulus IFO14147, a producer of .epsilon.-poly-L-lysine which exhibited antimicrobial activity. The sequence anal. of a 4.6-kb fragment in pNO33 revealed four putative open reading frames, one of which exhibited a significant homol. to the bldB gene product involved in morphogenesis and antibiotic prodn. by S. coelicolor. Restriction mapping was also performed.

IT 28211-04-3, .epsilon.-Polylysine

RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL

(Biological study); FORM (Formation, nonpreparative)  
(isolation and sequence anal. of cyclic plasmid pNO33 from  
.epsilon.-poly-L-lysine-producing actinomycete Streptomyces albulus  
IFO14147)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 23 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:501444 HCAPLUS

DOCUMENT NUMBER: 133:119381

TITLE: Food preservatives containing gluconates and glycine  
and manufacture of foods with them

INVENTOR(S): Yoshimura, Koichi; Kuwahara, Yuri; Yamashita, Ai;  
Kimura, Kazutaka

PATENT ASSIGNEE(S): Shinko Gijutsu Kaihatsu Center K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000201660	A2	20000725	JP 1999-42052	19990111
PRIORITY APPLN. INFO.:			JP 1999-42052	19990111
AB The food preservatives contain Na gluconate or K gluconate and glycine mixed with org. acids, their salts, EtOH, sucrose <b>fatty</b> <b>acid</b> esters, vitamin B1 esters, .epsilon.-polylysine, protamine, lysozyme, chitosan, and/or polyphosphate salts. Custard contg. Na gluconate 0.3, glycine 0.1, and NaOAc 0.3 wt.% showed good taste and could be preserved without bacterial growth for 7 days at 20.degree..				
IT <b>28211-04-3</b> , .epsilon.-Polylysine				
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)				
(food preservatives contg. gluconates, glycine, and)				

L35 ANSWER 24 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:464624 HCAPLUS

DOCUMENT NUMBER: 133:73253

TITLE: Food preservatives

INVENTOR(S): Takamine, Kazuhiro; Uedaka, Tomoki; Yamamoto, Seiji

PATENT ASSIGNEE(S): Torigoe Seifun K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000189129	A2	20000711	JP 1998-378527	19981228
PRIORITY APPLN. INFO.:			JP 1998-378527	19981228
AB A food preservative contains glycine, .epsilon.-polylysine, proteins from milt of fish, and antimicrobial glycerin <b>fatty acid</b> esters in combination with a soln. contg. .gtoreq. 1 compd. selected from the group comprising alkali metals, alk. earth metals, ammonium carbonates, phosphates, hydroxides, at pH .gtoreq. 7.0. The preservative				

maintains pH, and has potent antimicrobial effects in foods.  
IT **28211-04-3**, .epsilon.-Polylysine  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(food preservatives contg. antimicrobial glycerin **fatty acid** esters and)

L35 ANSWER 25 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:339459 HCAPLUS  
DOCUMENT NUMBER: 132:333712  
TITLE: Stable, rapidly soluble powders and their manufacture  
for protection of eggs  
INVENTOR(S): Kitamura, Akitoshi; Taniguchi, Akiko; Okada, Tomio  
PATENT ASSIGNEE(S): Fuji Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000139334	A2	20000523	JP 1998-311517	19981102
PRIORITY APPLN. INFO.:			JP 1998-311517	19981102

AB The powders are manufd. by granulating film-forming polymers while spraying them with aq. emulsions contg. polysaccharides, antimicrobial agents, and dispersing agents. The powders show good flowability and soly. and are useful for protection of eggs against fungi and bacteria including Salmonella.

IT **28211-04-3**, .epsilon.-Polylysine  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); PRP (Properties); BIOL (Biological study); USES (Uses)  
(stable, rapidly sol. powders contg. polysaccharides, antimicrobials, and dispersants for egg preservation)

L35 ANSWER 26 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:273990 HCAPLUS  
DOCUMENT NUMBER: 133:88438  
TITLE: Modification of functional properties of protamine and polylysine  
AUTHOR(S): Tanaka, Munehiko  
CORPORATE SOURCE: Dep. Food Sci. Technology, Tokyo Univ. Fisheries, Tokyo, 108-8477, Japan  
SOURCE: Foods & Food Ingredients Journal of Japan (2000), 185, 23-31  
CODEN: FFIJER; ISSN: 0919-9772  
PUBLISHER: FFI Janaru  
DOCUMENT TYPE: Journal  
LANGUAGE: Japanese

AB To improve the emulsifying properties of salmine (a protamine from salmon sperm) and .epsilon.-polylysine, their **conjugates** with dextran (mol. wt. 60,000-90,000) were prepd. through the Maillard reaction. Development of brown color and formation of salmine-dextran **conjugates** were concomitantly accelerated at heating temps. above glass transition temp. ((Tg)+30.degree.). The emulsifying activity of the **conjugates** became 4-5 times as high as that of salmine during the early stage of the Maillard reaction at 180-190.degree., but decreased drastically at the advanced stage. The antibacterial activity of salmine

was also increased by the **conjugation** with dextran. Even antibacterial activity against some species of Gram-neg. bacteria was attained as a result of the **conjugation**. The covalent attachment of dextran to polylysine (PL) was confirmed by Sephadex G-150 gel filtration chromatog. and SdS-PAGE. The resulting PL-dextran **conjugate** possessed an excellent emulsifying capacity when compared with com. emulsifiers. The emulsifying activity of the **conjugate** was not affected by the presence of 1.0M NaCl and pH >7. The PL-dextran **conjugate** could be used for the formulation of processed foods as a bifunctional food additive, emulsifier and antibacterial reagent.

IT **28211-04-3D**, .epsilon.-Polylysine, reaction products with dextran  
 RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
 (modification of functional properties of protamine and polylysine)

L35 ANSWER 27 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:218419 HCAPLUS

DOCUMENT NUMBER: 132:250378

TITLE: Antibacterial and antifungal compositions dissolved upon use for eggshell, their manufacture, and food coating agents

INVENTOR(S): Kitamura, Akitoshi; Taniguchi, Akiko; Okada, Tomio

PATENT ASSIGNEE(S): Fuji Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000093080	A2	20000404	JP 1998-265540	19980918
PRIORITY APPLN. INFO.:			JP 1998-265540	19980918

AB The compns., useful for egg preservation, eggshell reinforcement, and food coating, contain film-forming macromols. selected from polysaccharides, poly(vinyl alc.), poly(vinylpyrrolidone), poly(vinyl Me ether), carboxyvinyl polymers, poly(acrylic acid) Na salt, Na oleate, vinyl acetate, and morpholine **fatty acid** salts; dispersing agents; and antibacterial and antifungal agents. The agents inhibit the growth of fungi and bacteria including Salmonella.

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study);  
 USES (Uses)  
 (sol. preservatives contg. macromols., dispersants, and antimicrobial agents for eggshell and food coating)

L35 ANSWER 28 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:214739 HCAPLUS

DOCUMENT NUMBER: 132:250377

TITLE: Egg-protecting agents dissolved upon use and their manufacture

INVENTOR(S): Kitamura, Akitoshi; Taniguchi, Akiko; Okada, Tomio

PATENT ASSIGNEE(S): Fuji Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1



PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000093079	A2	20000404	JP 1998-272196	19980925
PRIORITY APPLN. INFO.:			JP 1998-272196	19980925

AB The agents, useful for egg preservation and eggshell reinforcement, contain film-forming macromols. selected from polysaccharides, poly(acrylic acid) Na salt, Na oleate, vinyl acetate, and morpholine **fatty acid** salts; dispersing agents; and antibacterial and antifungal agents. The agents inhibit the growth of fungi and bacteria including Salmonella.

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study);  
 USES (Uses)  
 (sol. egg preservatives contg. macromols., dispersants, and antimicrobial agents)

L35 ANSWER 29 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:183855 HCAPLUS

DOCUMENT NUMBER: 133:38940

TITLE: Isolation and sequence analysis of plasmid pNO33 in the .epsilon.-poly-L-lysine-producing actinomycete Streptomyces albulus IF014147

AUTHOR(S): Takagi, Hiroshi; Hoshino, Yusuke; Nakamori, Shigeru; Inouye, Satoshi

CORPORATE SOURCE: Department of Bioscience, Fukui Prefectural University, Fukui, 910-1195, Japan

SOURCE: Journal of Bioscience and Bioengineering (2000), 89(1), 94-96  
 CODEN: JBBIF6; ISSN: 1389-1723

PUBLISHER: Society for Bioscience and Bioengineering, Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A high-mol.-size plasmid (37-kb), named pNO33, has been isolated from Streptomyces albulus IF014147, a producer of .epsilon.-poly-L-lysine which exhibited antimicrobial activity. The sequence anal. of a 4.6-kb fragment in pNO33 revealed four putative open reading frames, one of which exhibited a significant homol. to the bldB gene product involved in morphogenesis and antibiotic prodn. by S. coelicolor.

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
 (isolation and sequence anal. of plasmid pNO33 in .epsilon.-poly-L-lysine-producing actinomycete Streptomyces albulus IF014147)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 30 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:82520 HCAPLUS

DOCUMENT NUMBER: 132:236120

TITLE: Improving emulsifying activity of .epsilon.-polylysine by **conjugation** with dextran through the Maillard reaction

AUTHOR(S): Ho, Yu-Ting; Ishizaki, Shoichiro; Tanaka, Munehiko

CORPORATE SOURCE: Department of Food Science and Technology, Tokyo University of Fisheries, Tokyo, 108-8477, Japan

SOURCE: Food Chemistry (2000), 68(4), 449-455  
 CODEN: FOCHDJ; ISSN: 0308-8146

PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB .epsilon.-Polylysine (PL) was **conjugated** with dextran through the Maillard reaction to improve its emulsifying activity. The covalent attachment of dextran to PL was confirmed by Sephadex G-150 gel filtration chromatog. and SDS-polyacrylamide gel electrophoresis (SDS-PAGE). The resulting PL-dextran **conjugate** possessed an excellent emulsifying activity as compared with com. emulsifiers. The emulsifying activity of **conjugate** was not affected even in the presence of 1.0 M NaCl and above pH 7. In addn., the PL-dextran **conjugate** retained most of the original antimicrobial activities of PL. The PL-dextran **conjugate** thus prepd. could be used for the formulation of processed foods as a bifunctional food additive, emulsifier and antibacterial reagent.

IT 28211-04-3DP, .epsilon.-Polylysine, **conjugates** with dextran

RL: FFD (Food or feed use); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(improving emulsifying activity of .epsilon.-polylysine by **conjugation** with dextran through Maillard reaction)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 31 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:63216 HCAPLUS

DOCUMENT NUMBER: 132:124549

TITLE: Antibacterial cleaning composition with good storability for kitchen uses

INVENTOR(S): Takano, Katsuyuki; Maruta, Kazunari

PATENT ASSIGNEE(S): Kao Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000026885	A2	20000125	JP 1998-191349	19980707
PRIORITY APPLN. INFO.:			JP 1998-191349	19980707

AB Title compn., useful for cleaning sponges, chopping boards, dishes, vegetables, and fruits, etc., comprises (A) surfactants 1-80, (B) polylysine 0.0001-1, and (C) .gtoreq.1 compd. selected from 2-bromo-2-nitropropane-1,3-diol, 1,2-benzisothiazolin-3-one, and 5-chloro-2-methyl-4-isothiazolin-3-one 0.00001-0.2 wt%. Thus, a cleaning agent comprising tetraethylene glycol dodecyl ether Na sulfate 13, dodecyl di-Me amine oxide 2, palm-kernel **fatty acid** diethanolamide 4, CH<sub>3</sub>(CH<sub>2</sub>)<sub>11</sub>CONH(CH<sub>2</sub>)<sub>3</sub>N<sup>+</sup>(CH<sub>3</sub>)<sub>2</sub>CH<sub>2</sub>COO<sup>-</sup> 2, .epsilon.-polylysine 0.5, 2-bromo-2-nitropropane-1,3-diol 0.02, and H<sub>2</sub>O showed good foaming ability, cleaning power, and antibacterial effect against Escherichia coli and Staphylococcus aureus even after high temp. storage.

IT 28211-04-3

RL: TEM (Technical or engineered material use); USES (Uses)  
(prepn. of antibacterial cleaning compn. with good storability for kitchen uses)

L35 ANSWER 32 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:62402 HCAPLUS  
DOCUMENT NUMBER: 132:92503  
TITLE: Sustained antibacterial antifungal coating materials  
for foods  
INVENTOR(S): Kitamura, Akitoshi; Taniguchi, Akiko; Okada, Tomio  
PATENT ASSIGNEE(S): Fuji Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000023616	A2	20000125	JP 1998-197861	19980713

PRIORITY APPLN. INFO.: JP 1998-197861 19980713

AB The invention relates to an antibacterial antifungal coating material having sustained activity, suitable for use for foods, e.g. eggs, wherein the material contains an antibacterial antifungal agent, e.g. paraben, chitosan, **fatty acid**, etc., dispersed in a film-forming polymer selected from a group consisting of polysaccharide, polyvinyl alc., polyvinylpyrrolidone, polyvinyl Me ether, carboxyvinyl polymer and polyacrylic acid sodium salt, with/without a surfactant. An emulsion contg. sodium alginate 10, Bu paraben 0.6, iso-Bu paraben 0.6, iso-Pr paraben 0.8 g and water 200 mL was prepd. and applied on the surface of eggs.

IT **28211-04-3**, .epsilon.-Polylysine  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(sustained antibacterial antifungal coating materials for foods contg.)

L35 ANSWER 33 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:60064 HCAPLUS  
DOCUMENT NUMBER: 132:109803  
TITLE: Kitchen cleaning composition with less skin chapping  
INVENTOR(S): Takano, Katsuyuki; Maruta, Kazunari; Ide, Kazutoshi  
PATENT ASSIGNEE(S): Kao Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000026889	A2	20000125	JP 1998-191346	19980707

PRIORITY APPLN. INFO.: JP 1998-191346 19980707

OTHER SOURCE(S): MARPAT 132:109803

AB Title compn., suitable for cleaning sponges, chopping boards, dishes, vegetables, and fruits, etc., comprises (A) alkyl glycoside 5-80, (B) N-contg. nonionic surfactant 1-50, (C) polylysine 0.0001-1, and (D) chelating agent 0.01-5 wt%. Thus, a cleaning agent comprising an alkyl glycoside 10, dodecyl di-Me amine oxide 2, palm-kernel **fatty acid** diethanolamide 3, .epsilon.-polylysine 0.5, Na citrate 0.5, and H2O showed good foaming ability, cleaning power, antibacterial effect against Escherichia coli and Staphylococcus aureus, and hand-chapping degree 4.

IT **28211-04-3**, .epsilon.-Polylysine  
RL: TEM (Technical or engineered material use); USES (Uses)

(Antibacterial agent; prepn. of kitchen cleaning compn. with less skin chapping)

L35 ANSWER 34 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2000:60063 HCAPLUS  
DOCUMENT NUMBER: 132:109802  
TITLE: Antibacterial cleaning composition for kitchen uses  
INVENTOR(S): Takano, Katsuyuki; Maruta, Kazunari  
PATENT ASSIGNEE(S): Kao Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000026887	A2	20000125	JP 1998-191348	19980707
JP 3269030	B2	20020325		

PRIORITY APPLN. INFO.: JP 1998-191348 19980707

AB Title compn., useful for cleaning sponges, chopping boards, dishes, vegetables, and fruits, etc., comprises (A) surfactants 1-80, (B) polylysine 0.0001-1, and (C) .gtoreq.1 compd. selected from C7-12 aryl sulfonic acids, C7-12 aryl carboxylic acids, their salts and esters (C<4 alkyl for alkyl-contg. compds.) 0.1-5 wt%. Thus, a cleaning agent comprising polyoxyethylene dodecyl ether Na sulfate 13, dodecyl di-Me amine oxide 2, palm-kernel **fatty acid** diethanolamide 4, CH<sub>3</sub>(CH<sub>2</sub>)<sub>11</sub>CONH(CH<sub>2</sub>)<sub>3</sub>N<sup>+</sup>(CH<sub>3</sub>)<sub>2</sub>CH<sub>2</sub>COO<sup>-</sup> 2, .epsilon.-polylysine 0.5, Na p-toluenesulfonate 0.5, and H<sub>2</sub>O showed good foaming ability, cleaning power, and antibacterial effect against Escherichia coli and Staphylococcus aureus.

IT **28211-04-3**, .epsilon.-Polylysine

RL: TEM (Technical or engineered material use); USES (Uses)  
(prepn. of antibacterial cleaning compn. for kitchen uses)

L35 ANSWER 35 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2000:60062 HCAPLUS  
DOCUMENT NUMBER: 132:95019  
TITLE: Antibacterial dishwashing detergent compositions  
INVENTOR(S): Takano, Katsuyuki; Maruta, Kazunari; Ide, Kazutoshi  
PATENT ASSIGNEE(S): Kao Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000026886	A2	20000125	JP 1998-191347	19980707

PRIORITY APPLN. INFO.: JP 1998-191347 19980707

OTHER SOURCE(S): MARPAT 132:95019

AB The compns., useful for cleaning of dishwashing sponges, chopping boards, dishes, vegetables, etc., contain anionic surfactants 5-80, N-contg. nonionic surfactants 1-50, polylysine 0.0001-1, and chelating agents 0.01-5%. Thus, Na dodecylbenzenesulfonate 10, palm-kernel **fatty acid** diethanolamide 5, .epsilon.-polylysine 0.5, Na citrate 0.2, and H<sub>2</sub>O to 100% were mixed to give a compns. showing good foaming,

detergency, and antibacterial effect against Escherichia coli and Staphylococcus aureus.

IT 28211-04-3, .epsilon.-Polylysine

RL: TEM (Technical or engineered material use); USES (Uses)  
(antibacterial dishwashing detergents contg. N-contg. nonionic surfactants, polylysine, and chelating agents)

L35 ANSWER 36 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:267087 HCAPLUS

DOCUMENT NUMBER: 130:301748

TITLE: Cleansing wet tissues containing polylysine, glycerides, and ethanol as disinfectants

INVENTOR(S): Okuda, Keiko; Kato, Kazushi

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11113780	A2	19990427	JP 1997-280398	19971014
PRIORITY APPLN. INFO.:			JP 1997-280398	19971014

AB The wet tissues, useful for cleansing skin, cleaning food containers, kitchen, refrigerators, toilets, etc., and packaging fruits and vegetables, are manufd. by impregnating nonwoven fabrics contg. 10-100% cellulosic fibers with an aq. soln. contg. polylysine and/or its salts, glycerin **fatty acid** esters, and EtOH at 0.5-5 parts per 1 part fabrics. The wet tissues are not toxic when ingested, and skin-compatible upon long-term use. A cuprammonium cellulose nonwoven fabric was impregnated with an aq. soln. contg. .epsilon.-polylysine 0.25, Sunsoft 700P 2 1.0, and EtOH 30% to give a cleansing wet tissue. The wet tissue inhibited growth of Aspergillus niger, candida albicans, Pseudomonas aeruginosa, and Escherichia coli.

IT 28211-04-3, .epsilon.-Polylysine

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); DEV (Device component use); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cleansing wet tissues contg. polylysine, glycerides, and ethanol as disinfectants)

L35 ANSWER 37 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:267086 HCAPLUS

DOCUMENT NUMBER: 130:343070

TITLE: Wet cleansing tissues containing nonirritant disinfectants

INVENTOR(S): Okuda, Keiko; Kato, Kazufumi

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11113779      A2      19990427      JP 1997-280397      19971014  
PRIORITY APPLN. INFO.:      JP 1997-280397      19971014  
AB    Disinfectant wet cleansing tissues comprise nonwoven fabrics contg. 10-100 wt.% cellulosic fibers impregnated with 0.5-5 times as much wt. as that of the fabric of aq. solns. contg. polylysine and/or its salts and glycerin **fatty acid** esters. A nonwoven fabric (100 g) of regenerated cellulose fibers was impregnated with 250 g aq. soln. contg 0.25 wt.% .epsilon.-polylysine and 1.0 wt.% glycerin C8 **fatty acid** monoester to give a wet cleansing tissue, which controlled *Aspergillus niger*, *Candida albicans*, *Pseudomonas aeruginosa*, and *Escherichia coli* and did not irritate human skin.  
IT    **28211-04-3**, .epsilon.-Polylysine  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
      (nonirritant wet cleansing tissues of cellulosic nonwovens contg. polylysine and glycerin **fatty acid** esters for disinfection)

L35 ANSWER 38 OF 68    HCAPLUS    COPYRIGHT 2003 ACS  
ACCESSION NUMBER:      1999:201577    HCAPLUS  
DOCUMENT NUMBER:      130:257392  
TITLE:                   Antibacterial agents containing .epsilon.-polylysine and organic acids  
INVENTOR(S):            Ito, Takashi; Matsumoto, Yasuo  
PATENT ASSIGNEE(S):    Chisso Corp., Japan  
SOURCE:                 Jpn. Kokai Tokkyo Koho, 8 pp.  
                          CODEN: JKXXAF  
DOCUMENT TYPE:          Patent  
LANGUAGE:               Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 11076376	A2	19990323	JP 1997-254209	19970903
PRIORITY APPLN. INFO.:			JP 1997-254209	19970903
AB    Antibacterial materials for various items, comprise .epsilon.-polylysine or its salts and org. acids. The items, such as medical goods, daily commodities, clothings, food containers, and food packages, are sprayed, spread, or immersed in the antibacterial materials. An aq. soln. contg. 0.1 % .epsilon.-polylysine and 1 % acetic acid was sprayed onto a polypropylene sheet and dried. The sheet showed antibacterial effects against <i>Escherichia coli</i> and <i>Staphylococcus aureus</i> .				
IT <b>28211-04-3</b> , .epsilon.-Polylysine				
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)				
(antibacterial coating agents contg. .epsilon.-polylysine and org. acids)				

L35 ANSWER 39 OF 68    HCAPLUS    COPYRIGHT 2003 ACS  
ACCESSION NUMBER:      1998:758279    HCAPLUS  
DOCUMENT NUMBER:      130:53602  
TITLE:                   Antibacterial washfast nontoxic synthetic fibers contg. poly(L-lysine) and/or salts thereof  
INVENTOR(S):            Yamaguchi, Osamu; Fukuda, Shigenori  
PATENT ASSIGNEE(S):    Chisso Corp., Japan  
SOURCE:                 Jpn. Kokai Tokkyo Koho, 8 pp.  
                          CODEN: JKXXAF  
DOCUMENT TYPE:          Patent

LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10310935	A2	19981124	JP 1997-126433	19970430
PRIORITY APPLN. INFO.:			JP 1997-126433	19970430

AB The fibers consist of thermoplastic polymers and contain 0.005-10% (on fiber) .epsilon.-poly(L-lysine) (I) and/or I salts and 0.05-10% (on fiber, as pure component) C12-20 **fatty acid** metal salts as dispersing agents. The fibers are useful for medical care materials, garments, bedding materials, and filters (no data). A compn. contg. polypropylene and 0.01% .epsilon.-poly(L-lysine) hydrochloride and 0.1% Zn stearate was pelletized, melt spun, drawn to draw ratio 4.3 at 110.degree., mech. crimped, heat-treated at 100.degree., cut, made into a nonwoven web, and embossed to give a nonwoven fabric exhibiting good bacteria extinction properties on contacting the fabric with a bacteria growth medium contg. K. pneumoniae for 18 h at 37.degree. and good washfastness of antibacterial properties.

IT **28211-04-3**  
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)  
(bactericide; antibacterial washfast nontoxic synthetic fibers contg. poly(L-lysine) and/or salts thereof)

L35 ANSWER 40 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1998:675074 HCAPLUS  
DOCUMENT NUMBER: 129:344629  
TITLE: Polylysine-based antibacterial paper  
INVENTOR(S): Ito, Keishi; Hiraki, Atsushi  
PATENT ASSIGNEE(S): Chisso Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10280299	A2	19981020	JP 1997-96802	19970331
JP 3296244	B2	20020624		
PRIORITY APPLN. INFO.:			JP 1997-96802	19970331

AB The paper comprises a paper substrate, a surfactant (glycerin monolaurate) and .epsilon.-polylysine or it salt.

IT **28211-04-3, .epsilon.-Polylysine 28211-04-3D, .epsilon.-Polylysine, salts**  
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use);  
BIOL (Biological study); USES (Uses)  
(polylysine-based antibacterial paper)

L35 ANSWER 41 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1997:812442 HCAPLUS  
DOCUMENT NUMBER: 128:74568  
TITLE: Thermal resistance and prevention of spoilage bacterium, Alicyclobacillus acidoterrestris, in acidic beverages  
AUTHOR(S): Yamazaki, Koji; Isoda, Chieko; Tezuka, Hirokazu; Kawai, Yuji; Shinano, Haruo

CORPORATE SOURCE: Fac. Fish., Hokkaido Univ., Hakodate, 041, Japan  
 SOURCE: Nippon Shokuhin Kagaku Kogaku Kaishi (1997), 44(12),  
 905-911  
 CODEN: NSKKEF; ISSN: 1341-027X  
 PUBLISHER: Nippon Shokuhin Kagaku Kogakkai  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese

AB The thermal resistant characteristics of spores of thermoacidophile, Alicyclobacillus acidoterrestris, and the inhibitory effect of some food preservatives on the outgrowth of the heat resistant spore were investigated to prevent flat sour type spoilage in acidic beverages. The values of D<sub>95</sub>.degree. were about a minute in 20 mM citrate buffer in the pH range of 2.5-6.9. The thermal resistance of A. acidoterrestris spores showed a unique characteristic that it did not depend on pH of heating medium over the pH range of 2.5-6.9 as compared with that of general Bacillus spores. The D<sub>95</sub>.degree. values of them in the acidic beverages were higher than those in the citrate buffer. Accordingly, it might be less effective to lower the pH in food for reducing the thermal resistance of A. acidoterrestris spores. In detg. the effect of some food preservatives on the thermal resistance of A. acidoterrestris spores, the addn. of lysozyme was effectively contributed to the redn. of their thermal resistance in a citrate buffer at pH 4.0, and also exhibited a similar reducing effect in the acidic beverages. In addn., the outgrowth of A. acidoterrestris spores was inhibited by the addn. of lysozyme, polylysine, protamine, acetic acid, sucrose ester or polyglycerol esters in Trypticase Soy Broth at pH 4.0. From these findings, we propose that it would be better to add a lysozyme and another one of the above preservatives at the same time in order to prevent the spoilage caused by A. acidoterrestris in acidic beverages.

IT 28211-04-3, Poly(.epsilon.-lysine)  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study);  
 USES (Uses)  
 (thermal resistance and prevention of spoilage bacterium,  
 Alicyclobacillus acidoterrestris, in acidic beverages)

L35 ANSWER 42 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1997:575416 HCAPLUS  
 DOCUMENT NUMBER: 127:178004  
 TITLE: Antibacterial cleaning compositions for food and food containers  
 INVENTOR(S): Hamamichi, Yoshiko; Beiri, Lee  
 PATENT ASSIGNEE(S): Teii Hooru K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09176689	A2	19970708	JP 1995-340252	19951227
JP 3037605	B2	20000424		

PRIORITY APPLN. INFO.: JP 1995-340252 19951227

AB Title cleaning compns. suitable for vegetables, fruits, and food containers comprise polylysine, a chelating agent, a surfactant, and a solvent. A compn. contained .epsilon.-polylysine 4.0 wt.%, EDTA disodium salt 4.0 wt.%, cane sugar ester with fatty acids 3.8 wt.%, decaglycerin ester with fatty acids 10.0 wt.%,



propylene glycol 20 wt.%, and water. The compn. had good cleaning ability and activity against Escherichia coli and Staphylococcus aureus.

IT 28211-04-3, .epsilon.-Polylysine  
RL: TEM (Technical or engineered material use); USES (Uses)  
(antibacterial cleaning compns. for food and food containers)

L35 ANSWER 43 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:402472 HCAPLUS  
DOCUMENT NUMBER: 127:30403  
TITLE: Slimicides and microbicides containing sulfur compounds for kitchen and bathroom  
INVENTOR(S): Hamazaki, Seiji  
PATENT ASSIGNEE(S): Daito Kagaku K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09124422	A2	19970513	JP 1995-283159	19951031
PRIORITY APPLN. INFO.:			JP 1995-283159	19951031
AB Title agents contain salts chosen from sulfites, hydrogen sulfites, and thiosulfates, microbicides, and surfactants. Newpol (polyoxyethylene-polyoxypropylene block copolymer) 8.75, Na2SO3 3.13, Na dehydroacetate 0.63, and Ag2O 0.5 g were mixed to prep. a column-shaped slimicide.				
IT 28211-04-3, .epsilon.-Polylysine				
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)				
(slimicides and microbicides contg. S compds. for kitchen and bathroom)				

L35 ANSWER 44 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:101085 HCAPLUS  
DOCUMENT NUMBER: 126:100698  
TITLE: Antimicrobial aerosol compositions containing .epsilon.-polylysine  
INVENTOR(S): Shigemura, Kenichi; Ishikawa, Yoshimasa; Mino, Tsutomu; Okuno, Haruhiko  
PATENT ASSIGNEE(S): Tokyo Eazoru Kagaku Kk, Japan; Okuno Chem Ind Co  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08319208	A2	19961203	JP 1995-149797	19950525
PRIORITY APPLN. INFO.:			JP 1995-149797	19950525
AB Safe and long-lasting antimicrobial aerosol compns., useful for refrigerators, etc., comprise aq. (EtOH) solns. contg. 0.05-3 wt.% .epsilon.-polylysine (I) and propellants. EtOH 47.20, H2O 52.20, I 0.40, and CO2 0.20 part were mixed to prep. an aerosol showing inhibition of Bacillus subtilis, Escherichia coli, lactic acid bacteria, and Pseudomonas aeruginosa.				
IT 28211-04-3, .epsilon.-Polylysine				

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
(antimicrobial aerosol compns. contg. .epsilon.-polylysine)

L35 ANSWER 45 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:53934 HCAPLUS

DOCUMENT NUMBER: 126:79757

TITLE: Novel hair dyes containing basic polymers and acidic polymer-dye **conjugates**

INVENTOR(S): Kizawa, Kenji; Hiraoka, Junichiro; Igarashi, Shigeru; Murakami, Umeji

PATENT ASSIGNEE(S): Kanebo Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08291036	A2	19961105	JP 1995-116368	19950417

PRIORITY APPLN. INFO.: JP 1995-116368 19950417

AB Novel hair dyes having good dying property contain a first reagent comprising basic polymers and a second reagent comprising acidic polymer-dye **conjugates**. As an example, a hair dye comprised:  
(A) a first reagent contg. 1 mg polylysine and 0.1% Tween 20 and (B) a second reagent contg. polyglutamic acid-titanium black 10S **conjugate** and 1 wt.% Tween 20.

IT 28211-04-3, .epsilon.-Polylysine

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(novel hair dyes contg. basic polymers and acidic polymer-dye **conjugates**)

L35 ANSWER 46 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:335975 HCAPLUS

DOCUMENT NUMBER: 125:11476

TITLE: Preparation of glyated poly-L-lysine from poly-L-lysine and 3-O-methylglucose

INVENTOR(S): Kashiwamura, Naoki

PATENT ASSIGNEE(S): Sakai Mieko, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08067695	A2	19960312	JP 1994-227360	19940829

PRIORITY APPLN. INFO.: JP 1994-227360 19940829

AB A glyated poly-L-lysine, which has an activity of producing an active enzyme and cleaving **nucleic acids** (no data), is prepd. by reacting .epsilon.-poly-L-lysine, H[NHCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH(NH<sub>2</sub>)CO]nOH, or .alpha.-poly-L-lysine, H[NHCH(CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)CO]nOH, with 3-O-methyl-D-glucose under physiol. condition. Thus, 100 mg .epsilon.-poly-L-lysine and 0.1 M 3-O-methyl-D-glucose were dissolved in

10.0 mL 0.1 M phosphoric acid buffer and after adding 0.1% gentamycin as an preservative, degassed, purged with N, and incubated at 37.degree. for 7 days to give 120 mg 3-O-methyl-D-glucose-glycated .epsilon.-poly-L-lysine.

IT **28211-04-3DP**, glycation product with 3-O-methyl-D-glucose  
RL: MSC (Miscellaneous); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of glycated poly-L-lysine by glycation of poly-L-lysine with 3-O-methylglucose)  
IT **28211-04-3**  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of glycated poly-L-lysine by glycation of poly-L-lysine with 3-O-methylglucose)

L35 ANSWER 47 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:321359 HCAPLUS  
DOCUMENT NUMBER: 125:8720  
TITLE: Glycated polysine manufacture from polylysine  
INVENTOR(S): Kashiwamura, Naoki; Fujeda, Masako; So, Ken; Kato, Takeshi; Sato, Ikuo; Inagaki, Minoru; Nishikawa, Shiro  
PATENT ASSIGNEE(S): Sakai Mieko, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08089268	A2	19960409	JP 1994-252944	19940921
PRIORITY APPLN. INFO.:			JP 1994-252944	19940921
AB Glycated polysine (I) is prepd. from .epsilon.- or .alpha.-poly-L-lysine, and 3-O-methyl-D-glucose by glycation under physiol. conditions. I produces active O radical and cleaves <b>nucleic acid</b> .				
IT <b>28211-04-3</b> RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (glycated polysine manuf. from polylysine)				

L35 ANSWER 48 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:774731 HCAPLUS  
DOCUMENT NUMBER: 123:168261  
TITLE: Protamine and .epsilon.-polylysine for food preservation  
INVENTOR(S): Murata, Masato  
PATENT ASSIGNEE(S): Taiyo Kagaku Kk, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07135943	A2	19950530	JP 1993-314440	19931118
JP 3352794	B2	20021203		
PRIORITY APPLN. INFO.:			JP 1993-314440	19931118
AB Food preservatives are prepd. from protamine, .epsilon.-polylysine, glycerine fatty ester, and/or polyglycerine fatty ester.				

IT 28211-04-3, .epsilon.-Polylysine  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(protamine and .epsilon.-polylysine for food preservation)

L35 ANSWER 49 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1995:299972 HCAPLUS  
DOCUMENT NUMBER: 122:79691  
TITLE: Food preservatives  
INVENTOR(S): Murata, Masato  
PATENT ASSIGNEE(S): Taiyo Kagaku Kk, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06269265	A2	19940927	JP 1993-85739	19930319

PRIORITY APPLN. INFO.: JP 1993-85739 19930319

AB A preservative which maintains balanced tastes in foods, for example beef stew, consists of a glyceride and .gtoreq. 1 compd. selected from the group comprising (1) lysozyme, (2) .epsilon.-polylysine or salt thereof, (3) glycine, (4) an org. acid and/or salt thereof, and (5) an inorg. acid and/or salt thereof.

IT 28211-04-3, .epsilon.-Polylysine  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(food preservatives contg.)

L35 ANSWER 50 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1995:299965 HCAPLUS  
DOCUMENT NUMBER: 122:79688  
TITLE: Food preservatives  
INVENTOR(S): Murata, Masato  
PATENT ASSIGNEE(S): Taiyo Kagaku Kk, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06253797	A2	19940913	JP 1993-62823	19930226

PRIORITY APPLN. INFO.: JP 1993-62823 19930226

AB A preservative which maintains balanced tastes in foods like custard cream consists of a **fatty acid** polyglyceryl ester, and .epsilon.-polylysine or salt thereof, optionally .gtoreq. 1 compd. selected from the group comprising glycine, org. acids and/or salts thereof, and inorg. acids and/or salts thereof.

IT 28211-04-3, .epsilon.-Polylysine  
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(food preservatives contg.)

L35 ANSWER 51 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1995:299946 HCAPLUS  
DOCUMENT NUMBER: 122:79687  
TITLE: Food preservatives containing lysozyme, organic, and

INVENTOR(S): inorganic acids  
 Murata, Masato  
 PATENT ASSIGNEE(S): Taiyo Kagaku Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06261725	A2	19940920	JP 1993-77685	19930311
PRIORITY APPLN. INFO.:			JP 1993-77685	19930311
AB A food preservative contains .gtoreq. 1 compd. selected from the group comprising (1)fatty acid polyglyceryl esters, (2)lysozyme, (3) .epsilon.-polylysine derived from Streptomyces, or salts thereof, (4) glycine, (5) org. acids and/or salts thereof, and (6) inorg. acids and/or salts thereof; the fatty acids are caprylic acid, capric acid, lauric acid, and myristic acid. The effects of preservatives on tofu and spinach are demonstrated.				
IT 28211-04-3, .epsilon.-Polylysine				
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (food preservatives contg. lysozyme, org., and inorg. acids and)				

L35 ANSWER 52 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:234838 HCAPLUS  
 DOCUMENT NUMBER: 122:8562  
 TITLE: Glycerides, lysozyme, and polylysine as food preservatives  
 INVENTOR(S): Murata, Masato  
 PATENT ASSIGNEE(S): Taiyo Kagaku Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06225740	A2	19940816	JP 1993-41905	19930205
PRIORITY APPLN. INFO.:			JP 1993-41905	19930205
AB A preservative consists of middle-chain fatty acid monoglycerides, lysozyme, and .epsilon.-polylysine ( salts thereof), optionally, with glycine, inorg. acids and/or salts, carboxylic acids and/or salts. The preservative is useful for a wide variety of foods including cooked foods, fish pastes, meats, noodles, etc.				
IT 28211-04-3, .epsilon.-Polylysine				
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (glycerides and lysozyme and polylysine as food preservatives)				

L35 ANSWER 53 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:164912 HCAPLUS  
 DOCUMENT NUMBER: 120:164912  
 TITLE: Preparation of .epsilon.-polylysines as quality improvers for bread or sponge cake dough  
 INVENTOR(S): Noshio, Yasuharu; Ikehara, Toshinori; Sasaya, Sachiko; Hashimoto, Shinichi  
 PATENT ASSIGNEE(S): Kanegafuchi Chemical Ind, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05246963	A2	19930924	JP 1992-81684	19920302
PRIORITY APPLN. INFO.:			JP 1992-81684	19920302
AB	H[NH(CH <sub>2</sub> ) <sub>4</sub> C(NHR)CO] <sub>n</sub> OH [I; R = H, C.g.toreq.8 (un)satd. <b>fatty acid</b> acyl; n = 20-30], which have emulsifying and antimicrobial effect, are prepd. as quality improvers for bread or sponge cake dough. An aq. soln. of 2.97 g .epsilon.-polylysine was treated with 6.97 g n-stearoyl chloride and NaOH at room temp. for 1 h to give I (R = stearoyl) (II). Bread contg. 1% II was preserved at 25.degree. for 9 days without generation of fungi.			
IT	<b>28211-04-3</b> , .epsilon.-Polylysine RL: RCT (Reactant); RACT (Reactant or reagent) (amidation of, with <b>fatty acid</b> chlorides)			

L35 ANSWER 54 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1994:143735 HCAPLUS  
DOCUMENT NUMBER: 120:143735  
TITLE: Anticaries and periodontosis-treating agents  
INVENTOR(S): Hiraki, Jun  
PATENT ASSIGNEE(S): Chisso Corp, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05310544	A2	19931122	JP 1992-148220	19920514
JP 3114359	B2	20001204		
PRIORITY APPLN. INFO.:			JP 1992-148220	19920514
AB	The title agents contain .epsilon.-poly-L-lysine (I) or its salts as active ingredients. I inhibited Bacteroides mutans at MIC of 25 .mu.g/mL and did not affect intestinal flora. EtOH 20, Na saccharinate 0.05, Na monofluorophosphate 0.1, sucrose <b>palmitate</b> 0.5, I 0.05, flavor 1, and H <sub>2</sub> O to 100.0 wt.% were mixed to give a mouthwash.			
IT	<b>28211-04-3</b> RL: BIOL (Biological study) (dentifrices contg., anticaries, for treatment of periodontosis)			

L35 ANSWER 55 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1993:538098 HCAPLUS  
DOCUMENT NUMBER: 119:138098  
TITLE: Manufacture of rice products with .epsilon.-polylysine  
INVENTOR(S): Kawano, Takashi; Takabayashi, Masamitsu; Yamamoto, Naohiro  
PATENT ASSIGNEE(S): Yamamoto Sangyo Kk, Japan; Seibutsu Kagaku Sangyo Kenkyus  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05146263	A2	19930615	JP 1991-355485	19911127

PRIORITY APPLN. INFO.: JP 1991-355485 19911127

AB Rice products, with good preservability, are manufd. by soaking washed rice in aq. acidic solns. contg. .epsilon.-polylysine (I) and keeping the H2O content to 20-35%. Washed rice (2 kg) was treated with an aq. soln. contg. I 500, fumaric acid 500, and sucrose **fatty acid** ester 500 mg, the rice (at H2O content 30.7%) packaged, kept for 60 days, and then cooked. The rice showed good taste and texture.

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: BIOL (Biological study)  
 (rice preservation with aq. acidic solns. contg.)

L35 ANSWER 56 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1993:232562 HCAPLUS  
 DOCUMENT NUMBER: 118:232562  
 TITLE: **DNA**-damaging activity of natural food additives. VI  
 AUTHOR(S): Ueno, Seiichi; Ishizaki, Mutsuo  
 CORPORATE SOURCE: Ibaraki Hyg. Lab., Mito, 310, Japan  
 SOURCE: Shokuhin Eiseigaku Zasshi (1992), 33(4), 378-82  
 CODEN: SKEZAP; ISSN: 0015-6426  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese

AB A spore-recombination assay of 20 natural food additives with or without fraction S9 metabolic activation showed that seven (citrus seed ext., hinokitiol, tea ext., Japanese mint, black tea flavor, bergamot and marjoram) had **DNA**-damaging activity. Rosemary ext. and .epsilon.-polylysine (50% powder) showed neg. and/or pos. mutagenic activity.

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
 (mutagenicity of)

L35 ANSWER 57 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1993:39396 HCAPLUS  
 DOCUMENT NUMBER: 118:39396  
 TITLE: Synthesis and antimicrobial activity of N.alpha.-poly-acyl-N.epsilon.-poly-L-lysine derivatives  
 AUTHOR(S): Noshio, Yasuhiro; Ikehara, Toshinori; Sasatani, Yoshiko; Yamauchi, Hiroaki; Hashimoto, Shinichi  
 CORPORATE SOURCE: Food Res. Dep., Kaneka Corp., Takasago, 676, Japan  
 SOURCE: Chemistry Express (1992), 7(10), 753-6  
 CODEN: CHEXEU; ISSN: 0911-9566  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB .alpha.-Amino groups in .epsilon.-poly-L-lysine were **acylated** with various **fatty acids**. The resulting compds. have stronger antimicrobial activity against mold than .epsilon.-poly-L-lysine. The influence of **fatty acid** chain length and degree of **acylation** of the .alpha.-amino group on the antimicrobial activity was investigated.

IT **28211-04-3**  
 RL: RCT (Reactant); RACT (Reactant or reagent)

(amidation of, with **fatty acid** chlorides,  
antimicrobial agents from)  
IT **28211-04-3DP**, .alpha.-amides with **fatty acids**  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, as mold inhibitor in bread and margarine)

L35 ANSWER 58 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1992:590691 HCAPLUS  
DOCUMENT NUMBER: 117:190691  
TITLE: Manufacture of water-in-oil emulsions containing  
polyglycerin ricinoleate as emulsifier and manufacture  
of foods with them  
INVENTOR(S): Hasegawa, Mikio; Yazawa, Yoshuki; Myagawa, Hisao;  
Kato, Chihiro; Kumagai, Tetsuo  
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04179451	A2	19920626	JP 1990-223291	19900824
JP 2844494	B2	19990106		

PRIORITY APPLN. INFO.: JP 1990-179291 19900706

AB Noodles, pastas, and cooked rice are manufd. by mixing rice or wheat with  
0.1-10% water-in-oil emulsions (av. particle size .ltoreq.1 .mu.m) contg.  
polyglycerin ricinoleate (I) as an emulsifier and amino acids,  
**nucleic** acids, and/or org. acids (e.g. carboxylic acids) in the  
aq. phase. The cooked rice shows less stickiness and the noodles and  
pastas show better stretching ability. Vegetable oil (70 parts) was mixed  
with 2.0 parts CR 500 (I) and emulsified with 28.0 parts H2O contg. 0.5  
part glycine to give water-in-oil emulsion (av. particle size 0.5 .mu.m),  
which was stable at 20.degree. for .gtoreq.3 mo. Rice was cooked with the  
emulsion to show good quality.

IT **28211-04-3**, .epsilon.-Polylysine  
RL: BIOL (Biological study)  
(noodles and cooked rice contg. emulsions contg. polyglycerin  
ricinoleate and)

L35 ANSWER 59 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1992:468837 HCAPLUS  
DOCUMENT NUMBER: 117:68837  
TITLE: Food preservatives containing ethanol, polylysine, and  
protamine  
INVENTOR(S): Kinekawa, Yoichi; Namikoshi, Yasuo; Hiraki, Jun;  
Fujii, Masahiro  
PATENT ASSIGNEE(S): Chisso Corp., Japan; Daiichi Kasei Co., Ltd.  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04008273	A2	19920113	JP 1990-110302	19900427



JP 2838574 B2 19981216  
 PRIORITY APPLN. INFO.: JP 1990-110302 19900427  
 AB Food preservatives contain (i) EtOH, (ii) polylysine and/or its salts 0.01-10, (iii) microbicidal basic proteins 0.01-10, and optional (i.v.) (di)glycerin esters with middle-chain or lower **fatty acids** 0.01-10 wt.%. The materials show synergistic microbicidal effect. Sausage was inoculated with Leuconostoc methenteroides and Candida parapsilosis, treated with liq. preservative comprising .epsilon.-polylysine 0.3, protamine of salmon roe 0.1, diglycerin monocaprylate 0.3, EtOH 60.0, and H2O 39.3 wt.%, and left at 32.degree. for 72 h to show no microorganism and almost no alc. odor.  
 IT **28211-04-3D**, .epsilon.-Polylysine, mixts. contg.  
 RL: BIOL (Biological study)  
 (food preservatives contg., synergistic)

L35 ANSWER 60 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1992:464822 HCAPLUS  
 DOCUMENT NUMBER: 117:64822  
 TITLE: Synergistic microbicidal compositions containing ethanol, polylysine, and protamine  
 INVENTOR(S): Kinekawa, Yoichi; Namikoshi, Yasuo; Hiraki, Jun; Fujii, Masahiro  
 PATENT ASSIGNEE(S): Chisso Corp., Japan; Daiichi Kasei K. K.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04018003	A2	19920122	JP 1990-118792	19900510

PRIORITY APPLN. INFO.: JP 1990-118792 19900510  
 AB The title compns., which are useful in food manuf. and show long-lasting activity, contain (i) anhydr. EtOH or aq. soln. contg. .gtoreq.30 wt.% EtOH, (ii) polylysine and/or its salts 0.01-10, (iii) microbicidal basic proteins 0.01-10, and, optionally, (di)glycerin esters with middle-chain or lower **fatty acids** 0.01-10 wt.%.  
 .epsilon.-Polylysine 0.3, protamine of salmon roe 0.1, glycerin monocaprylate 0.3, EtOH 60.0, and H2O 39.3 wt.% were mixed to show 100% microbicidal effect on Escherichia coli, Leuconostoc methenteroides, and Candida parapsilosis.  
 IT **28211-04-3D**, .epsilon.-Polylysine, mixts. contg.  
 RL: BIOL (Biological study)  
 (microbicides, synergistic)

L35 ANSWER 61 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1991:654748 HCAPLUS  
 DOCUMENT NUMBER: 115:254748  
 TITLE: Antimicrobial preservatives containing ethanol, polylysines, and **fatty acid** esters for food  
 INVENTOR(S): Hiraki, Jun; Fujii, Masahiro  
 PATENT ASSIGNEE(S): Chisso Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03168075	A2	19910719	JP 1989-304630	19891127
JP 2743101	B2	19980422		

PRIORITY APPLN. INFO.: JP 1989-304630 19891127

AB Antimicrobial preservatives for food comprise .gtoreq.0.1 wt.% polylysine (salts) and .gtoreq.0.1 wt.% medium- or short-chain **fatty acid** esters with glycerin or sorbitan dissolved in anhyd. or .gtoreq.30 wt.% aq. EtOH. A soy sauce soup for noodle was preserved with a formulation of EtOH 70, glycerin caprylate 0.3, polylysine 0.3, and H2O 29.4 wt.% at 25.degree. for 4 days without growth of Zygosaccharomyces rouxii IFO 1130.

IT **28211-04-3**, .epsilon.-Polylysine  
 RL: BIOL (Biological study)  
 (antimicrobial food preservatives contg. ethanol and glycerin or sorbitan **fatty acid** esters and)

L35 ANSWER 62 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1989:633438 HCAPLUS  
 DOCUMENT NUMBER: 111:233438  
 TITLE: **Nucleic** acid analogs for high-performance liquid chromatography  
 AUTHOR(S): Inaki, Yoshiaki; Nagae, Suguru; Miyamoto, Takashi; Sugiura, Yoshihiko; Takemoto, Kiichi  
 CORPORATE SOURCE: Fac. Eng., Osaka Univ., Suita, 565, Japan  
 SOURCE: Polymer Science and Technology (Plenum) (1988), 38(Appl. Bioact. Polym. Mater.), 185-204  
 CODEN: POSTB5; ISSN: 0093-6286  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB **Nucleic** acid base and nucleoside derivs. were bonded to 3-aminopropyl-silanized silica (APS-silica) and silica gel. These resins were useful as the columns of high performance liq. chromatog. (HPLC) for the selective sepn. of oligoethylenimine derivs. having pendant thymine or adenine bases. These column systems were also applicable to the sepn. of nucleosides, nucleotides, and oligonucleotides.

IT **28211-04-3D**, amide and nucleotide-amide derivs.  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with **acylated** nucleoside base)

L35 ANSWER 63 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1988:475546 HCAPLUS  
 DOCUMENT NUMBER: 109:75546  
 TITLE: Cellulose gels having good biochemical affinity and their manufacture  
 INVENTOR(S): Ishibashi, Hiroaki; Takasaki, Shinichi  
 PATENT ASSIGNEE(S): Chisso Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63056501	A2	19880311	JP 1986-199569	19860826
JP 04027504	B4	19920512		

PRIORITY APPLN. INFO.: JP 1986-199569 19860826  
AB Title gels with good mech. strength, useful as supports for affinity chromatog. even at high flow rate operations are prepd. by introducing .epsilon.-polylysine having d.p. 20-30 obtained by the fermn. of Streptomyces albulus onto functional group-bearing spherical cellulose particles. Thus, mixing 50 g formylated cellulose (formyl cellulotine) with 100 mL 0.2 M Na<sub>2</sub>HPO<sub>4</sub>-NaOH buffer (pH 11.0) contg. 0.5 g .epsilon.-polylysine at 30.degree. for 1 h, reducing with 400 mg NaCNBH<sub>3</sub> overnight, and stirring with 14.6 g L-lysine and 400 mg NaCNBH<sub>3</sub> for 2 h gave a gel with immobilized .epsilon.-polylysine 5 mg/mL gel. Passing 200 mL human blood serum at flow rate 22 mL/h through a column (1.2 cm .times. 9 cm) packed with the gel and pre-equilibrated with 50 nM phosphate buffer at pH 7.5, washing with 50 mL 0.5 M NaCl-contg. buffer, and eluting with 20 mL 0.2 M .epsilon.-aminocaproic acid soln. showed a recovery capacity of plasminogen 1.2 mg/mL vs. 0.6 mg/mL for cm. .epsilon.-polylysine-agarose.  
IT **28211-04-3D**, reaction products with functionalized celluloses  
RL: USES (Uses)  
(support gels, for affinity chromatog. with good capacity and mech. strength)

L35 ANSWER 64 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1988:62491 HCAPLUS  
DOCUMENT NUMBER: 108:62491  
TITLE: Hair preparations containing .epsilon.-poly-L-lysine for dandruff control  
INVENTOR(S): Minamino, Hiromi; Yazawa, Itaru; Okamura, Taketoshi; Morita, Yutaka; Kurokawa, Yasuhiro; Furukawa, Hidenori  
PATENT ASSIGNEE(S): Kanebo, Ltd., Japan; Chisso Corp.  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 62221616	A2	19870929	JP 1986-64530	19860322

PRIORITY APPLN. INFO.: JP 1986-64530 19860322  
AB Hair preps. contain .epsilon.-poly-L-lysine(I) and/or its salts which are used safely for the control of dandruff. A shampoo was prepd. consisting of I 0.2, polyoxyethylene lauryl ether Na sulfate 15.0, coconut oil **fatty acid** diethanolamide 5.0, Na benzoate 0.2, di-Na edetate 0.2, and H<sub>2</sub>O to 100% by wt.  
IT **28211-04-3**  
RL: BIOL (Biological study)  
(hair prepn. contg., for dandruff control)

L35 ANSWER 65 OF 68 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1987:457719 HCAPLUS  
DOCUMENT NUMBER: 107:57719  
TITLE: Preservatives for foods  
INVENTOR(S): Morita, Yutaka; Kurokawa, Yasuhiro; Fujii, Masahiro  
PATENT ASSIGNEE(S): Chisso Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62058975	A2	19870314	JP 1985-194045	19850903
JP 01021746	B4	19890424		

PRIORITY APPLN. INFO.: JP 1985-194045 19850903

AB A food preservative consists of .epsilon.-polylysine (from Streptomyces species) or its salts with or without substances selected from glycine, lower **fatty acid** monoglycerides, fumaric acid, vitamin B1, and Na acetate. Thus, 100 g pork and 1000 mg .epsilon.-polylysine-HCl in a test tube were heated at 80.degree. for 10 min, cooled, and kept at 25.degree. and 90% relative humidity for 11 days. No spoilage was noted.

IT 28211-04-3

RL: BIOL (Biological study)  
(as preservative for foods)

L35 ANSWER 66 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1985:105839 HCAPLUS

DOCUMENT NUMBER: 102:105839

TITLE: Regiospecific .gamma.-**conjugation** of methotrexate to poly(L-lysine). Chemical and biological studies

AUTHOR(S): Rosowsky, Andre; Forsch, Ronald A.; Galivan, John; Susten, Sandra S.; Freisheim, James H.

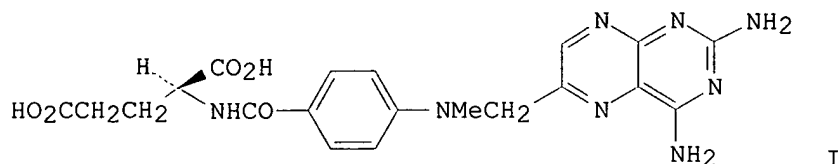
CORPORATE SOURCE: Dana-Farber Cancer Inst., Harvard Med. Sch., Boston, MA, 02115, USA

SOURCE: Molecular Pharmacology (1985), 27(1), 141-7  
CODEN: MOPMA3; ISSN: 0026-895X

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Regiospecific syntheses of .gamma.- and .alpha.-**conjugates** of methotrexate (I) and poly(L-lysine) are described. The .alpha.- and .gamma.-tert-Bu esters, resp., of I were coupled to poly(L-lysine) with diphenylphosphoryl azide in DMF, the ester-protecting group was cleaved with 15% HBr in HOAc, and small mols. were removed by dialysis. Poly(L-lysine) of Mr = 1500-8000 and 8000-30,000 was used to prep. 6 different **conjugates**, which were characterized by UV absorbance measurement and quant. amino acid anal. The degree of substitution varied from 1 I per 4.7 lysines to 1 I per 10.2 lysines. Dihydrofolate reductase [9002-03-3] inhibition in a cell-free assay was obsd. with .alpha.- and .gamma.-**conjugates**, but the latter had the greater affinity (only 3-fold less than that of I itself). The binding of the **conjugates** exhibited a slight pH dependence, with affinity being greater at pH 7.2 than at pH 8.5 for both .alpha.- and .gamma.-**conjugates**. Toxicity to cultured rat hepatoma cells (H35) was also greater for the .gamma.-**conjugates**, and showed some dependence on the chain-length and degree of substitution of the

poly(L-lysine) carrier. Cells resistant to I by virtue of a transport defect (H35R0.3 line) retained their sensitivity to the .gamma.-conjugate, but less so to the .alpha.-conjugate. There was also some retention of sensitivity in a more highly resistant cell line (H35R10) with impaired I transport and a concomitant increase in dihydrofolate reductase activity. .gamma.-Conjugation was likewise more favorable in cytotoxicity assays against L1210 murine leukemia cells, and there was partial retention of activity against highly I-resistant lines (L1210-R71 and L1240/R81) with a transport defect and/or an elevation of dihydrofolate reductase content. In antitumor assays against i.p. L1210 leukemia in mice, a .gamma.-conjugate with Mr = 8,000-30,000 and 1 I per 5.5 lysines produced a 35-75% increase in lifespan when administered i.p. at single doses equiv. to 10-20 mg/kg of I. A similar increase in lifespan with I alone on the single-dose regimen required 50-150 mg/kg. An .alpha.-conjugate of similar Mr and degree of substitution was inactive at nontoxic doses, as were other .gamma.-conjugates of lower Mr and/or degree of substitution. Thus, with a favorable combination of carrier size and I/lysine ratio, a .gamma.-conjugate of I to poly(L-lysine) is capable of markedly reducing the amt. of I needed to elicit a therapeutic response in mice with L1210 leukemia.

IT 28211-04-3DP, methotrexate complex

RL: SPN (Synthetic preparation); PREP (Preparation)

(.alpha.-.epsilon.- and .gamma.-.epsilon.-linked, prepn. and dihydrofolate reductase-inhibiting and neoplasm-inhibiting activity of)

L35 ANSWER 67 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:69557 HCAPLUS

DOCUMENT NUMBER: 96:69557

TITLE: New polymer syntheses. 5. Poly(L-ornithine), poly(L-lysine) and isopoly(L-lysine) with pending 2-thiothymine groups

AUTHOR(S): Kricheldorf, Hans R.; Fehrle, Martin

CORPORATE SOURCE: Inst. Makromol. Chem., Univ. Freiburg, Freiburg, D-7800, Fed. Rep. Ger.

SOURCE: Polymer Bulletin (Berlin, Germany) (1981), 6(1-2), 21-7

CODEN: POBUDR; ISSN: 0170-0839

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 1-(2-Carboxyethyl)-2-thiothymine was activated in the form of a N-hydroxysuccinimide ester. The NH<sub>2</sub> groups of poly-L-ornithine, poly-L-lysine, and isopoly-L-lysine were acylated with this activated ester, and the products were characterized by elemental anal., optical rotation, viscosity, and 1H- and 13C-NMR. IR indicates that the poly-L-ornithine and poly-L-lysine derivs. have a .alpha.-helical structure in the solid state.

IT 28211-04-3DP, (carboxyethyl)thiothymine derivs.

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. and properties of)

L35 ANSWER 68 OF 68 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1981:103825 HCAPLUS

DOCUMENT NUMBER: 94:103825

TITLE: New polymer syntheses, 3. Binding of nucleosides to basic polypeptides via isocyanatoisothiocyanates

AUTHOR(S): Kricheldorf, Hans R.; Fehrle, Martin J.

CORPORATE SOURCE: Inst. Makromol. Chem., Univ. Freiburg/Br., Freiburg/Br., D-7800, Fed. Rep. Ger.

SOURCE: Makromolekulare Chemie (1980), 181(12), 2571-85

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI

CODEN: MACEAK; ISSN: 0025-116X

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

- AB Nucleosides I [B = uracil (Ur), N6-benzoyladenine (BzAd)] were treated with OCNZNCS [Z = p-C6H4, (CH2)3, (CH2)5] to give isothiocyanato nucleosides II [B = Ur, Z = p-C6H4, (CH2)3; B = BzAd, Z = p-C6H4, (CH2)5], which were treated with polylysine, isopolylysine, polyornithine, and isopolyornithine to give polypeptide-bound nucleosides III [B = Ur, Z = p-C6H4, (CH2)3, m = 3, 4; B = BzAd, Z = p-C6H4, (CH2)5, m = 4; B = BzAd, Z = (CH2)3, m = 3] and IV [B = Ur, Z = p-C6H4, (CH2)3, m = 3, 4; B = BzAd, Z = (CH2)5, m = 4]. III and IV were characterized by elemental anal. and NMR.
- IT 28211-04-3DP, reaction products with isothiocyanato nucleosides  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

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(FILE 'HOME' ENTERED AT 14:53:10 ON 17 JUN 2003)

FILE 'HCAPLUS' ENTERED AT 14:53:22 ON 17 JUN 2003  
E SZEGO PETER/AU

L1 11 S E2-4  
SELECT RN L1 1

L2 FILE 'REGISTRY' ENTERED AT 14:54:48 ON 17 JUN 2003  
10 S E1-10

L3 FILE 'HCAPLUS' ENTERED AT 14:55:53 ON 17 JUN 2003  
1 S L1 AND L2

L4 FILE 'REGISTRY' ENTERED AT 14:58:52 ON 17 JUN 2003  
STR  
L5 1 S L4  
L6 250 S L4 FUL

L7 FILE 'HCAPLUS' ENTERED AT 15:10:01 ON 17 JUN 2003  
128 S L6  
L8 0 S L7 AND ?SZEGO?/AU  
L9 59 S L7 AND (?CONJUGAT? OR DNA OR RNA OR ?NUCLEIC?)

FILE 'REGISTRY' ENTERED AT 15:17:28 ON 17 JUN 2003  
L10 STR L4  
L11 STR  
L12 0 S L11  
L13 STR L11  
L14 0 S L13  
L15 STR L13  
L16 STR L15  
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L19 STR L15  
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L27 STR L26  
L28 0 S L27

FILE 'REGISTRY' ENTERED AT 15:46:36 ON 17 JUN 2003  
E POLYEPSILONLYSINE/CN  
E POLYEPSILON LYSINE/CN  
E POLYEPSILON LYS/CN  
E POLY EPSILON LYS/CN  
E POLY E LYS/CN  
E POLYLYSINE/CN

L29 FILE 'HCAPLUS' ENTERED AT 15:48:22 ON 17 JUN 2003  
0 S ?POLYEPSILON LYSINE?  
L30 44 S ?POLY EPSILON LYSINE?

FILE 'REGISTRY' ENTERED AT 15:51:27 ON 17 JUN 2003

L31 1 S 28211-04-3/RN

FILE 'HCAPLUS' ENTERED AT 15:51:43 ON 17 JUN 2003

L32 232 S L31 OR ?POLY EPSILON LYSINE?

L33 232 S L31 OR ?POLY EPSILON LYS?

L34 17 S L33 AND (?CONJUGAT? OR DNA OR RNA OR ?NUCLEIC?)

L35 68 S L33 AND (?CONJUGAT? OR DNA OR RNA OR ?NUCLEIC? OR ?ACYLAT? OR

FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, JICST-EPLUS, JAPIO' ENTERED AT  
15:54:42 ON 17 JUN 2003

L36 4 S L35

L37 3 DUP REMOV L36 (1 DUPLICATE REMOVED)

FILE 'HCAPLUS' ENTERED AT 15:56:51 ON 17 JUN 2003



=> file .biomed  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
186.57	740.46

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-44.27	-44.92

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L31 1 SEA FILE=REGISTRY ABB=ON 28211-04-3/RN  
 L33 232 SEA FILE=HCAPLUS ABB=ON L31 OR ?POLY EPSILON LYS?  
 L35 68 SEA FILE=HCAPLUS ABB=ON L33 AND (?CONJUGAT? OR DNA OR RNA OR  
 ?NUCLEIC? OR ?ACYLAT? OR ?SUCCINIC? OR ?PALMIT? OR ?FATTY?(W)?A  
 CID?)  
 L36 4 SEA L35  
 L37 3 DUP REMOV L36 (1 DUPLICATE REMOVED)

=> d ibib abs 137 1-3

L37 ANSWER 1 OF 3 MEDLINE DUPLICATE 1  
 ACCESSION NUMBER: 2003262049 IN-PROCESS  
 DOCUMENT NUMBER: 22672101 PubMed ID: 12785758  
 TITLE: pH- and Thermosensitive Supramolecular Assembling System:  
 Rapidly Responsive Properties of beta-Cyclodextrin-  
 Conjugated Poly(epsilon-  
 lysine).  
 AUTHOR: Choi Hak Soo; Huh Kang Moo; Ooya Tooru; Yui Nobuhiko  
 CORPORATE SOURCE: School of Materials Science, Japan Advanced Institute of  
 Science and Technology, 1-1 Asahidai, Tatsunokuchi,  
 Ishikawa 923-1292, Japan.  
 SOURCE: JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, (2003 May 28) 125  
 (21) 6350-1.  
 Journal code: 7503056. ISSN: 0002-7863.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals  
 ENTRY DATE: Entered STN: 20030606  
 Last Updated on STN: 20030606

AB beta-Cyclodextrin-conjugated poly(epsilon-  
 lysine) (beta-CDPL) was synthesized as a novel polymeric host for  
 constructing a smart supramolecular assembling system. Systematic studies  
 on the inclusion complexation between the polymeric host with an alpha- or  
 beta-CD cavity and a model guest molecule provided evidence that dual  
 cooperative interactions, specific host-guest interaction and  
 intermolecular ionic interaction, played a dominant role in leading to a  
 fast aggregation phenomenon. In addition, a rapid phase transition  
 induced by the supramolecular assembly was observed reversibly in response  
 to a small change in pH or temperature.

L37 ANSWER 2 OF 3 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
 ACCESSION NUMBER: 2002:327469 BIOSIS  
 DOCUMENT NUMBER: PREV200200327469  
 TITLE: Production of epsilon-polylysine in an airlift bioreactor  
 (ABR).  
 AUTHOR(S): Kahar, Prihardi; Kobayashi, Kengo; Iwata, Toshiharu;  
 Hiraki, Jun; Kojima, Mami; Okabe, Mitsuyasu (1)  
 CORPORATE SOURCE: (1) Laboratory of Biotechnology, Faculty of Agriculture,  
 Shizuoka University, 836 Ohya, Shizuoka, 422-8529:  
 acmokab@agr.shizuoka.ac.jp Japan  
 SOURCE: Journal of Bioscience and Bioengineering, (2002) Vol. 93,  
 No. 3, pp. 274-280. <http://www.elsevier.com/locate/jfermbio>  
 . print.  
 ISSN: 1389-1723.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 AB This paper deals with studies on epsilon-poly-L-lysine (epsilon-PL)

production in an airlift bioreactor (ABR) using *Streptomyces albulus* S410 (S410) to minimize the production cost including the downstream processing of epsilon-PL. In a 5-l ABR, 30 g/l of epsilon-PL was produced with a power consumption of 0.3 kW/m<sup>3</sup>, the production level being similar to that in a 5-l jar fermentor with a power consumption of 8.0 kW/m<sup>3</sup>. Furthermore, the leakage of intracellular **nucleic acid** (INA)-related substances into the culture broth in the ABR was less than that in the jar fermentor. Due to the high-level power consumption (8.0 kW/m<sup>3</sup>) in the jar fermentor, the morphology of the cells changed from the pellet to filament form due to the extensive shear stress arising from continuous agitation, thereby increasing the leakage of the INA-related substances into the culture broth. This suggested that ABR would have an advantage in the low-cost production of epsilon-PL over stirred tank type reactors (STR).

L37 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
ACCESSION NUMBER: 2000:95568 BIOSIS  
DOCUMENT NUMBER: PREV200000095568  
TITLE: Improving emulsifying activity of epsilon-polylysine by **conjugation** with dextran through the Maillard reaction.  
AUTHOR(S): Ho, Yu-Ting; Ishizaki, Shoichiro; Tanaka, Munehiko (1)  
CORPORATE SOURCE: (1) Department of Food Science and Technology, Tokyo University of Fisheries, 4-5-7 Konan, Minato, Tokyo, 108-8477 Japan  
SOURCE: Food Chemistry, (March, 2000) Vol. 68, No. 4, pp. 449-455. ISSN: 0308-8146.  
DOCUMENT TYPE: Article  
LANGUAGE: English  
SUMMARY LANGUAGE: English

AB epsilon-Polylysine (PL) was **conjugated** with dextran through the Maillard reaction to improve its emulsifying activity. The covalent attachment of dextran to PL was confirmed by Sephadex G-150 gel filtration chromatography and SDS-polyacrylamide gel electrophoresis (SDS-PAGE). The resulting PL-dextran **conjugate** possessed an excellent emulsifying activity as compared with commercial emulsifiers. The emulsifying activity of **conjugate** was not affected even in the presence of 1.0 M NaCl and above pH 7. In addition, the PL-dextran **conjugate** retained most of the original antimicrobial activities of PL. The PL-dextran **conjugate** thus prepared could be used for the formulation of processed foods as a bifunctional food additive, emulsifier and antibacterial reagent.